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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. XI.

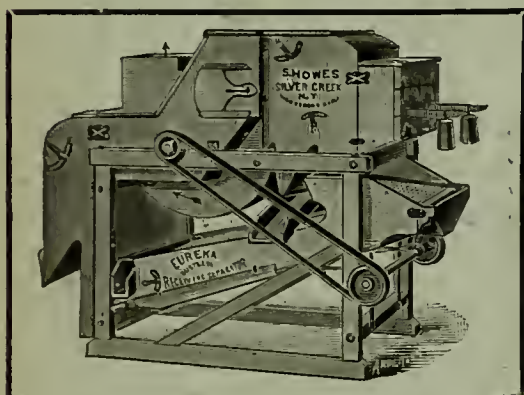
CHICAGO, ILLINOIS, MAY 15, 1893.

No. 11.

SUBSCRIPTION PRICE,
ONE DOLLAR PER ANNUM

THE Eureka Grain-Cleaning Machinery

FOR ELEVATOR USE



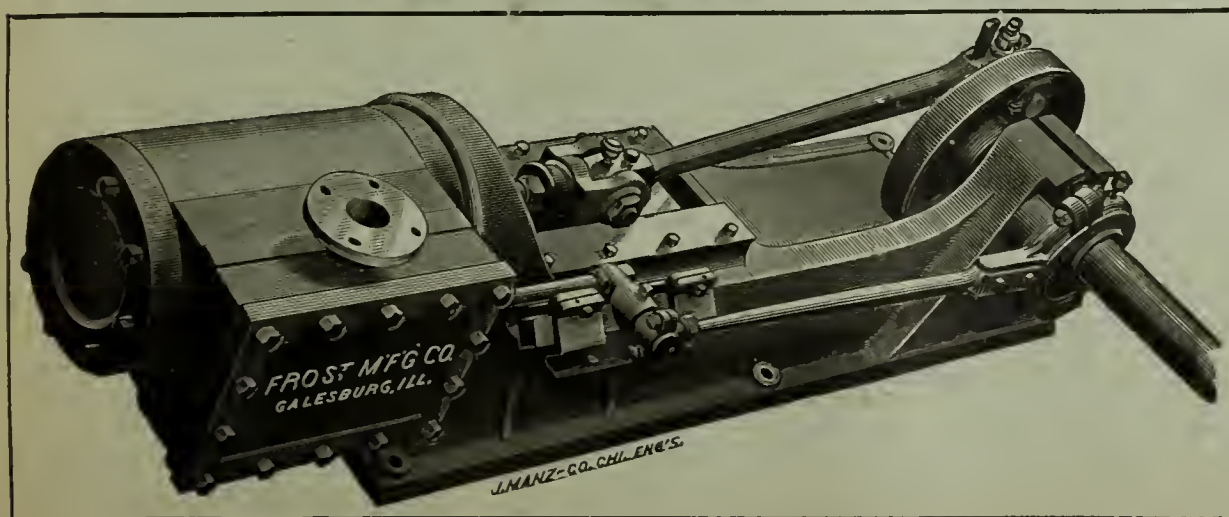
COMPRISES

- The Eureka Warehouse and Elevator Separator.
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C O N V E Y O R S	<p>*** Elevator Buckets. *** Elevator Boots. *** Elevator Bolts. ***</p> <h2 style="margin: 0;">THORNBURGH MFG. COMPANY,</h2> <h3 style="margin: 0;">MILL AND ELEVATOR SUPPLIES</h3> <p style="margin: 0;">110 & 112 SOUTH JEFFERSON STREET, CHICAGO, ILL.</p> <p style="margin: 0;">Elevating and Conveying Machinery a Specialty.</p> <p style="margin: 0;">*** PULLEYS. *** SHAFTING. *** HANGERS. ***</p>	B E L T I N G
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— ON —
Elevator Machinery
AND SUPPLIES
— OF —
EVERY DESCRIPTION,
ADDRESS EITHER STEAM OR HORSE-POWER,
The FROST MFG. CO.,
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WE ARE HEADQUARTERS

For all kinds of **MACHINERY** and **SUPPLIES**
FOR POWER TRANSMISSION, GRAIN ELEVATING AND GRAIN CLEANING,

—FOR—
Grain Elevators and Mills,

SUCH AS
SHAFTING, PULLEYS, HANGERS,
PILLOW-BLOCKS, CLUTCHES, COUPLINGS,
GEARS, SPROCKETS, SET COLLARS,
TAKE-UP BOXES, CRANE-SPOUTS,
LEATHER, RUBBER, COTTON AND LINK BELTING,
"FLEXIBLE" AND "SWIVEL" GRAIN SPOUTS,
ELEVATOR BOOTS, BUCKETS AND BOLTS,
"SPIRAL" AND "BELT" CONVEYORS,
"PLATFORM," "DUMP" AND "HOPPER" SCALES,
GRAIN SCOOPS AND POWER GRAIN SHOVELS.

—ALL SIZES OF—
Farm and Warehouse Fanning Mills,
GRAIN TESTERS, SEED TESTERS,
PERFORATED METALS, WIRE CLOTH,
Power Car Pullers, Oat Clippers, Dustless
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POLISHERS, SEPARATORS, GRADERS,
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BAG-TRUCKS, SIX-WHEEL WAREHOUSE TRUCKS, ETC.

GAS
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Capacity, 50 bushels per hour.

GRAIN TESTER.

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Grain and Seed Testing Scale.

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If you don't
SEE WHAT YOU
WANT,
ASK FOR IT.
We have got it.

E. H. PEASE MFG. CO.,
RACINE, WIS.

SEE OPPOSITE PAGE.

SAFEST,
MOST DURABLE
—AND—
Powerful Puller
ON EARTH.

HANDLES
15 to 20 Loaded
Cars at once on
STRAIGHT
and LEVEL
TRACK
and pro-rata on
GRADES
and
CURVES

"HERCULES" POWER CAR PULLER.

GRAIN ELEVATOR MACHINERY AND SUPPLIES

OUR SPECIALTY

Is to Furnish Every Description of

MACHINERY OR SUPPLIES

Required for the Equipment or Repairing of

GRAIN ELEVATORS

Such as:

**"SWEEP" and "TREAD" HORSE POWERS,
GAS ENGINES, OIL ENGINES, STEAM ENGINES.**

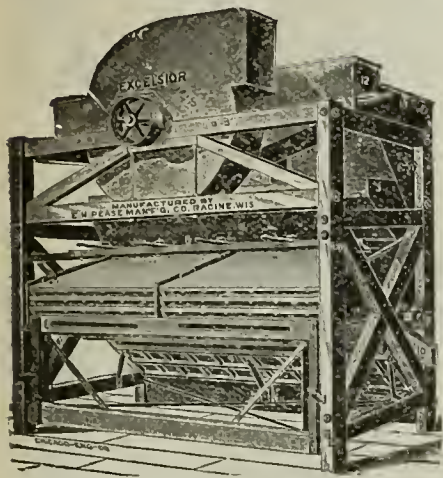
SHAFTING, PULLEYS, HANGERS,
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"FLEXIBLE" AND "SWIVEL" GRAIN SPOUTS.
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"SPIRAL" AND "BELT" CONVEYORS,
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GRAIN SCOOPS, AND POWER GRAIN SHOVELS.
—ALL SIZES OF—

FARM AND WAREHOUSE FANNING MILLS.

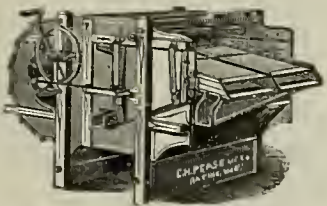
GRAIN TESTERS, SEED TESTERS,
PERFORATED METALS, WIRE CLOTH,

**Power Car Pullers, Oat Clippers, Dustless
Receiving Separators,**

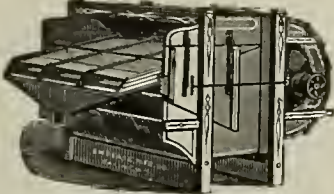
POLISHERS, SEPARATORS, GRADERS,
FLAX REELS AND SPECIAL FLAX MILLS.
"OVERHEAD," "SWEEP" AND "TREAD" HORSE POWERS.
BAG-TRUCKS, WAREHOUSE TRUCKS, ETC.



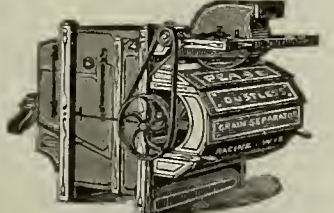
EXCELSIOR DUSTLESS ELEVATOR SEPARATOR,
Cleans, Separates and Grades Perfectly.
HAS NO SUPERIOR IN THE WORLD.



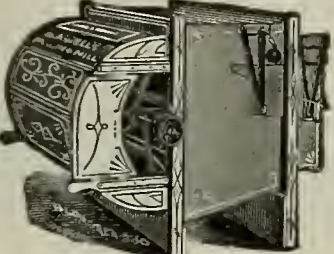
Pease Side Shake Mill for Warehouses.



Pease End Shake Mill for Warehouses.

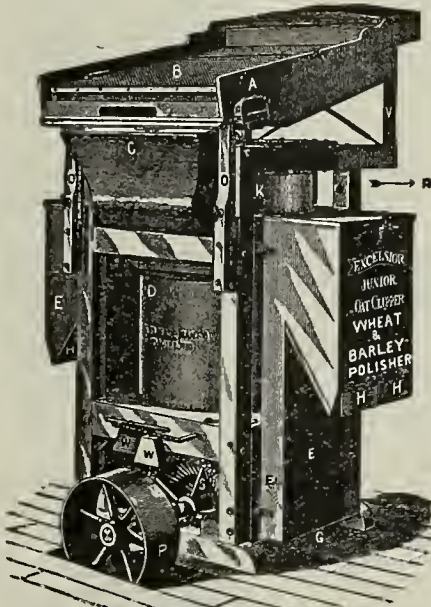


Pease Dustless Separator for Warehouses and Mills.



"Well's" Warehouse Mill.—Extra Large Capacity.

IT WILL PAY
YOU
TO GET OUR
CATALOGUES
PRICES
AND PROOFS OF
SUPERIORITY
BEFORE BUYING
ELSEWHERE.



EXCELSIOR JUNIOR

Oat Clipper, and Wheat and Barley Polisher, is the Simplest, Most Compact, **LIGHTEST** Running, Quickest Adjustable Machine of its kind made

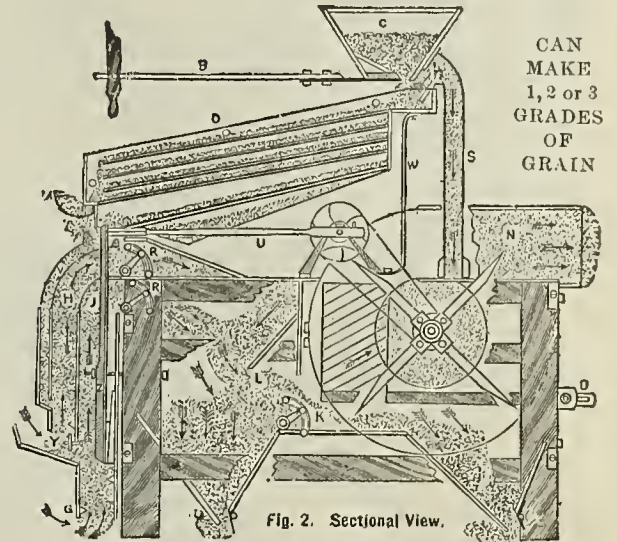
WE FULLY WARRANT
THE
SUPERIORITY
OF THE
MATERIALS USED,
THE CONSTRUCTION and
Operating Qualities
OF ALL OUR
MACHINERY.

ADDRESS

—ALL—

LETTERS CAREFULLY

—TO—

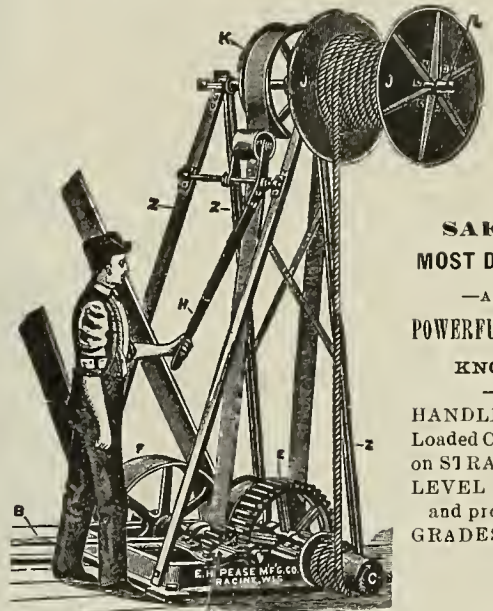


CAN
MAKE
1, 2 or 3
GRADES
OF
GRAIN

Fig. 2. Sectional View.

EXCELSIOR SEPARATOR AND GRADER.

The Finest Wheat or Barley Machine on Earth



**SAFEST,
MOST DURABLE
—AND—
POWERFUL PULLER
KNOWN.**

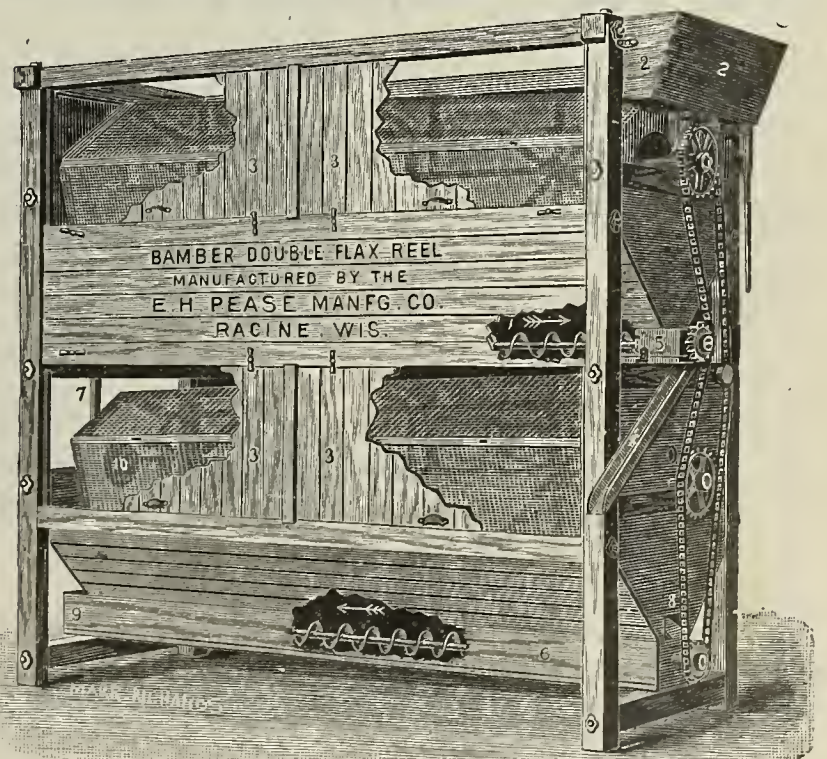
HANDLES 1 to 20
Loaded Cars at once
on STRAIGHT and
LEVEL TRACK
and pro rata on
GRADES and
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"HERCULES" POWER CAR PULLER.

PEASE
SPECIAL
FLAX MILLS
ARE
SUPERIOR
TO ALL OTHERS.

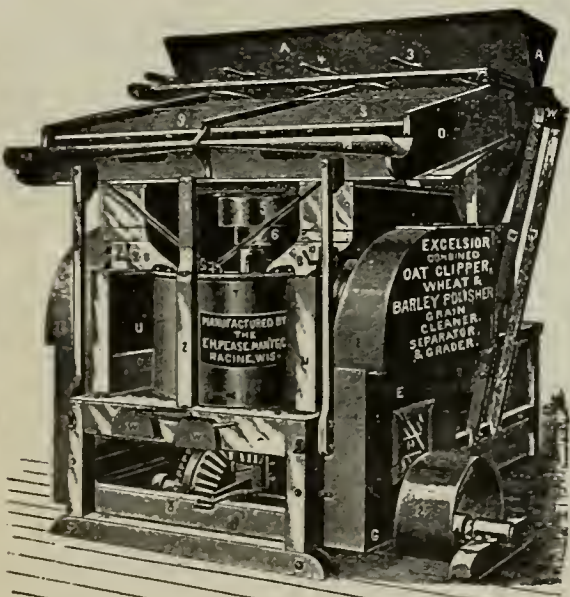
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Are Adopted and in more General Use by
THE MOST EXTENSIVE FLAX HANDLERS
Throughout the United States, than any similar Machines made



Made with 1, 2 or 4 Reels in one Chest, and with or without
Scalping Shoe."

Reels of any desired style or dimensions made to order.



EXCELSIOR COMBINED

Oat Clipper, Polisher, Separator, Grader and General
Dustless Elevator Separator.

This Machine has no Legitimate Rival in the World.
Send for particulars.

E. H. PEASE MFG. CO., RACINE, WIS., U. S. A.

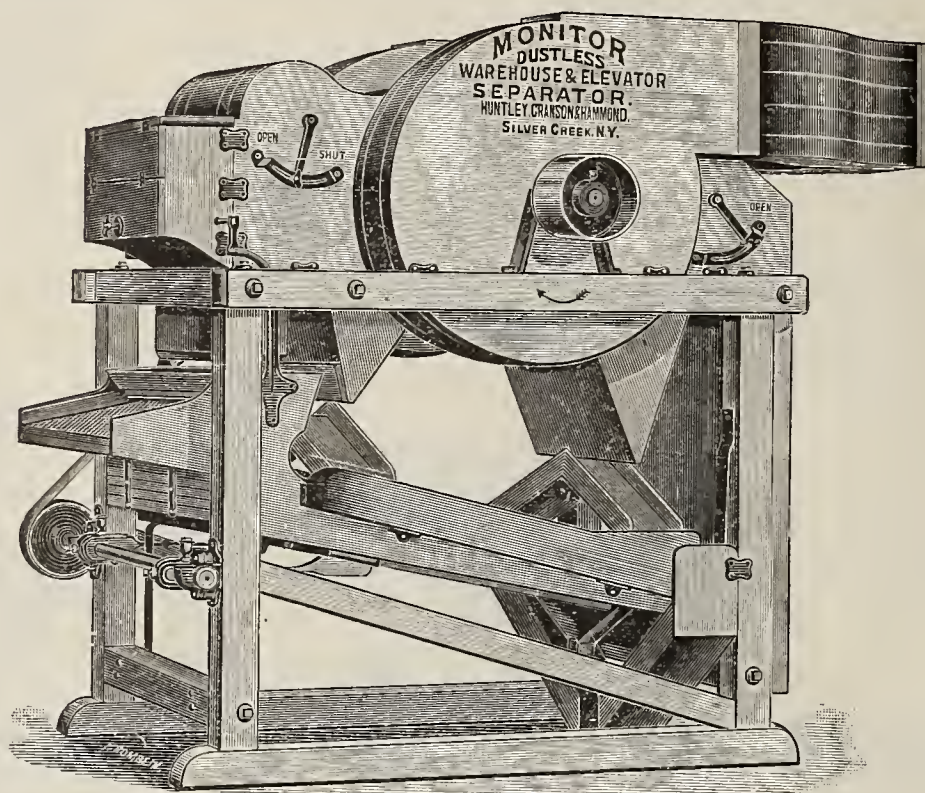
SEE OPPOSITE PAGE.

FAMOUS HAND OR POWER CLEANERS COUNTRY ELEVATORS.

The Successful Combination of 3 MACHINES IN ONE.

Cleaners for Elevators

THE MONITOR



CAN BE REGULATED TO CLEAN ALL KINDS OF GRAIN,
AND DO IT JUST AS REQUIRED.

NO EXPERIMENT BUT A DEMONSTRATED SUCCESS.

The Monitor Elevator Separators are now in successful operation in a large number of the prominent cleaning elevators in this country, and in every case operators are enthusiastic in its praise.

**It is the simplest machine made for the purpose.
It takes less power than any other.
It is easier to operate, requiring less care and attention.
It is easier placed, and spouted to.**

N. B. Every one of the leading cleaning elevators built during the last three years adopted the "Monitors." Comment is unnecessary. Write for descriptive circulars and full particulars to

A. F. SHULER,
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HUNTLEY, CRANSON & HAMMOND,

SILVER CREEK, N. Y.



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ELEVATOR FACILITIES OF THE B. & O. AT BALTIMORE.

No city in the country can boast of better tidewater facilities than Baltimore, and to the construction by the railroads of terminals for handling an almost unlimited amount of freight is largely due the present prosperous condition of the city. With bold water and a spacious harbor the railroad companies have been able to erect elevators, piers and other conveniences for receiving and shipping freight unequaled by those of any other port.

On the south side of the harbor the lofty elevators of the Baltimore & Ohio Railroad stand as monuments to Baltimore industry and enterprise. The company's tracks permeate nearly every section of Locust Point. Its piers are commodious and solidly constructed. The terminals of the road at this point afford facilities for handling nearly 500 carloads of grain a day, and the elevators afford storage accommodations for millions of bushels of grain. With such a harbor and such facilities for storing and shipping grain, it is no matter of surprise that the Western grain dealers look upon this city as the best market on the coast. Besides the Locust Point terminals, the Baltimore & Ohio owns several large piers on the other side of the harbor, which add much to its ability to handle its immense volume of freight with dispatch and without confusion.

There are six elevators in Baltimore used for storing grain. Three are owned by the Baltimore & Ohio Railroad Company. Elevators "B" and "C" of the Baltimore & Ohio Railroad Company, which are illustrated herewith, are at Locust Point, and have a capacity of 1,500,000 and 1,800,000 bushels, respectively. The third, a local elevator at Camden Station, has a capacity of 250,000 bushels. Elevator "B" has facilities for receiving about 550 cars a day and for delivering 1,000,000 bushels. Elevator "C" can receive 700 cars daily and deliver 1,000,000 bushels. The company employs about 75 men in operating the elevators.

The total elevator storage capacity in Baltimore is 5,350,000 bushels. In addition there are five floaters with a combined capacity for unloading 21,000 bushels

an hour. Western, Eastern and other extensions recently made by the railroads which enter Baltimore are already bearing fruit, and in the near future must add largely to the volume of the city's export trade. The Baltimore & Ohio, by the purchase of the Pitts-

heavier rails have been laid on the main lines and many new engines and cars have been purchased.

It is of interest to note that citizens of Baltimore were the pioneer railroad builders of the United States. Ever since its inception in 1826 the Baltimore & Ohio Railroad has been inseparably interwoven with the history of Baltimore, and for more than fifty years the railroad has been an important element in the prosperity and growth of the city. The first section of the road was opened for traffic on May 22, 1830. It was then a 13-mile road, extending from Baltimore to Ellicott Mills, on Patapsco River, and operated by horses, with the maximum speed of ten miles an hour. At present the Baltimore & Ohio is a comprehensive system of over 3,000 miles, connecting the great trade centers of the East—Baltimore, Philadelphia and New York—with the principal centers of the West. Its terminal facilities at Baltimore are planned on a magnificent scale, and when fully completed will provide admirable accommodations for handling the diversified and extensive business of the company. The tidewater terminus of the system is at Locust Point, directly within the main harbor, where the railroad has a large water frontage, with docks, elevators, coal shipping piers and yardage.



ELEVATOR FACILITIES OF THE B. & O. AT BALTIMORE.

burg & Western road, and building the Akron & Chicago Junction road, has so materially shortened its route from Baltimore to Chicago that there is only about three miles difference between it and the shortest line to the seaboard. During the past year the B. & O. has also made many other improvements. New and

NOT FARMING THAT WAY

"Henry!" said Mr. Cleveland to his private secretary. "Yes, your excellency."

"What's all that racket in the lobby?"

"I'll go and see, sir."

When Mr. Thurber returned, he said:

"It's a delegation of your faithful henchmen, your excellency, who desire an audience." "What do they want? Offices, I suppose?"

"They wish to call your attention to the fact that when the campaign was in progress divers persons were wont to express in song their belief that when Grover should be elected the Democrats should be in clover."

"I remember something of the song, Henry, but what of it?" "Your humble liegemen would like to know when they may expect the clover aforesaid."

"Henry," said the President, "you may refer all inquiries about clover to J. Sterling Morton. He is secretary of agriculture."

IMPROVEMENTS FOR ELEVATORS.

BY OBSERVER.

A matter of great importance to those contemplating building an elevator is the trustworthiness of the architect and builder. The man who has gathered together enough shekels to warrant him in building an elevator is one also who is particularly inclined to get his money's worth. He, in all probability, is anxious to have all the modern improvements. He is perfectly willing to pay for these improvements, but the difficulty is that he is unable to determine in a good many cases whether or not the alleged improvements are improvements. A great many new devices look well from a theoretical standpoint, but are afterward found, by practical experience, to be worthless. To make a success of the building and furnishing of an elevator, one must have had opportunities for becoming posted as to the practicability of new machinery and the worth and uses of new devices. No one has better opportunities in this respect than the architect, builder or contractor, and the man who pays out his money for a new elevator must depend largely on the advice and recommendations of his builder. Here is a difficulty.

There are perhaps very few architects or builders who would knowingly recommend a worthless device. So far as his experience goes he means to advise the purchase of what he considers the best plant and latest improvements. But all manufacturers of elevator supplies have their agents among architects and builders, and where there are prospective royalties there is very apt to be a warped judgment. A contractor or architect might be perfectly honest in recommending a certain machine and might conscientiously assure his patron that it was the best in the market when this might be far from being the case. I know of such cases. Almost everybody does.

The reason why such blunders are made is because those who are depended upon as knowing all about the machines of different makers do not know much about any others, but those they are ready to indorse. An architect or builder should therefore be entirely free from bias and should not only be ready to examine the machines of different makers and post himself as to their merits, but he should make a special effort to do so. To illustrate let me cite a case. Several years ago an elevator employe invented an improvement in one of the machines used in the elevator where he was engaged. The improvement was of such a nature that he could not manufacture it himself or have others make it except the makers of the machine themselves. The latter were ready to introduce it but would do so only on a small royalty per machine to the inventor. The improvement was so simple and the extra expense in adding it to the machine was manifestly so small that no considerable addition could be made to the price of the machine, so that the manufacturers were not pecuniarily interested in selling it.

The result was that in cases where their machines would sell without the improvement no mention of the improvement was made to purchasers. Now the inventor, in order to introduce the device, wrote to several prominent architects and builders calling their attention to the value of the invention and giving them undoubted evidence of its being a practical improvement. Without stating what the commission would be, he signified his willingness to deal liberally with them if they would help introduce the invention. None of them (with but one exception) made any reply. It was discovered shortly after that all of them were interested in the sale of the machines the makers of which controlled the device in question. (I should have stated that the contract with the makers was a sort of "trial" contract.) The operation of putting two and two together in this case was not difficult.

The fact that these same builders afterward heartily advised their patrons to use the improved machine proved that the aforesaid sums had been correctly added. But afterward the inventor was not in it for a royalty for each machine. Also, these same builders lived to see the day when the owners of the elevators they were building at the time their notice was first called to the invention paid nearly three times as much to have this improvement put in as it would have cost them if the improvement had been put in while the elevators were being built. Now I do not know the first thing about building an ele-

vator. I suspect, however, the preliminary steps are somewhat similar to those necessary in baking a certain kind of pie; with this difference: If it's to be an elevator you first get your shekels, if it's to be a rabbit pie you first catch your rabbit. But my observations lead me to firmly believe that a meritorious invention or valuable improvement for elevators must first find pecuniary favor with those who are to make it or advise its use. It must pay its way clear through all hands till it gets to the man who wants to use it.

Is this right? Should not an elevator builder derive his profits from building instead of furnishing? I'm not so much of an Utopian as to imagine that this will ever be. Men will make profits at every corner if they can. If I were contracting to have an elevator built and wanted the latest improvements and was willing to pay for them, and my architect didn't put them in because the latest didn't pay as good commission as some others, I'd try some one or a dozen ways to get even with him.

In a number of instances that I know of the builder has put in improved appliances after the elevator was off the contractor's hands, at great cost and great inconvenience. These improvements might have been put in when the elevator was being built at very little cost and no inconvenience.

It seems to me that it is a duty which every contractor owes his patrons to thoroughly post himself in regard to the worth of every new device. Furthermore, to be a thoroughly honest contractor he should not commit himself to Smith & Co.'s goods in such a way that will preclude his recommending an improvement because Smith & Co. are not making it. The owner has a right to know about improved appliances, and the contractor should be prepared to post him not only as to his own opinion, but as to the opinion of others.

It is clearly an imposition on the man who is paying out his money, and who, in many cases, is extremely desirous of having his elevator thoroughly equipped to allow him to put in appliances that are not up to date. And in this respect manufacturers are often wilfully at fault. It sometimes happens that improvements are made in the appliances they are manufacturing by one of their employes or by someone to whom they must pay a royalty. In such cases it seems to me it is a downright imposition on their patrons to sell them a machine without the improvement because it may consume some extra time to present and explain the improvement. There may be other reasons why they do not present the matter, as for example, they may be making the device on a temporary contract and are therefore not anxious to push it into notice until they can satisfy themselves as to its merits and have succeeded in making the best possible deal with the owner of the patent. Such a case may be rare, but I have known of a number of like instances. Of the fact that buyers feel that selling them other than the latest improvements is an imposition I had ocular evidence some years ago in the shape of a very apologetic letter written to a prominent customer. The letter seemed to indicate also that the manufacturers felt that they had not done exactly right. The circumstances were as follows:

The inventor of a certain improvement which is now used in large elevators all over this country, and which was being introduced (?) at that time on a "trial" contract, wrote to a world-famed miller whose elevator had recently burned, calling his attention to the improvement and asking him to investigate before placing his order for new appliances. He took in the situation and kindly sent the inventor two letters from the agents of the manufacturers. The first one was to the effect that they were extremely sorry that their salesman had neglected to call his attention to the new device, that it was an oversight and a serious one, as they considered the device in question the very best that had ever been invented, etc., etc. However, the machines (which had been ordered the day after the fire) were already received from the manufacturers and that if he (the customer) wanted the improvement they would have to be shipped back to the factory (about 1,000 miles).

The other letter was to the effect that the machines had been returned and that they would use all possible means to hurry them through. Begging his pardon again for the oversight, etc., etc., etc.

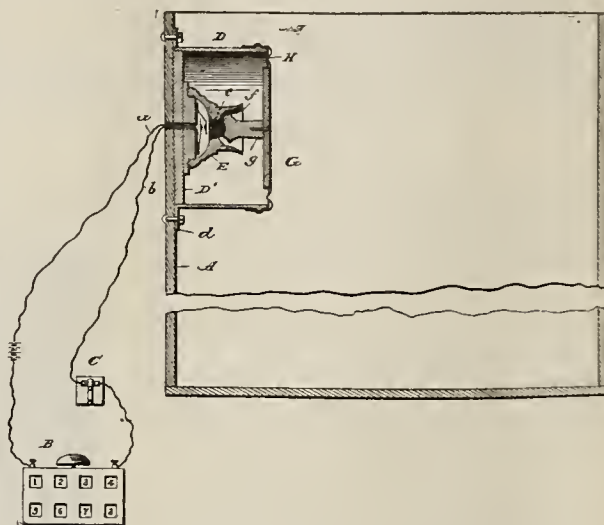
What's the deduction? Well the spirit of the

"combine" is abroad in this beautiful land of ours, and it permeates almost every business enterprise, legitimate and illegitimate. If a well meaning inventor succeeds in perfecting his machine he might reap a reward for his thought and labor, and at the same time bestow a blessing on the community, but for the demands of the complicated "system of distribution." Those who "do business" are above all, in all, and over all, and the producer and consumer must bear the brunt of the battle. What will be the status of affairs when these two classes succeed in the "combine" business the Lord only knows.

ELECTRICAL INDICATOR FOR GRAIN BINS.

The need of some means for indicating when a bin is full and the moment to cut off the supply of grain has always been acknowledged by elevator men. Such a device saves time and labor and presents waste of grain. By it the clerk in the office or the man at the revolver spout is notified the exact moment a bin is filled. The electric indicator invented by A. C. Thompson and H. E. Newton and controlled by E. Sherlock of Aurora, Neb., is claimed to accomplish this. It is said to be simple, cheap and effective and not likely to get out of order.

As shown in the illustration given herewith the de-



ELECTRICAL INDICATOR FOR GRAIN BINS.

vice is bolted to the side of a bin near the top. It consists of a casing *D*, with a diaphragm *G*, adapted to be pressed by the grain with the pin *g*, against the button *e*, closing the electric circuit and causing the bell *B* to ring. The diaphragm is made of muslin, oil silk or other flexible material that will move freely and exclude dust and grain. The casing is cylindrical, preferable of metal. The bell *B* with the numbered annunciator can be placed anywhere. A battery of several strong cells will generate sufficient electricity to operate a score of the indicators. The circuit breaker *C* is placed within reach and serves to stop the ringing of the bell.

Several of the indicators may be placed one above another in a deep bin to show when one quarter full, half full, three quarters full and full. When the bin has been drawn upon from time to time the quantity of grain remaining can be ascertained by closing the circuit at the contact-breaker *C*, thus causing the bell to ring and the annunciator to indicate the level of the grain. These indicators are used in Armour's elevators "A" and "B" at Chicago, where they are giving satisfaction.

Clover seed, amounting to 415,698 pounds, was exported during March, against 419,089 pounds during March, 1892; and during the nine months ending with March 7,766,421 pounds was exported, against 19,275,726 pounds during the corresponding period of 1891-2.

In March 3,595 bushels of wheat and 16 barrels of wheat flour were imported, against 50,960 bushels of wheat and 22 barrels of flour in March last year. In the nine months ending with March 736,841 bushels of wheat and 352 barrels of wheat flour were imported, against 1,900,343 bushels of wheat and 424 barrels of flour in the corresponding months of 1891-2. In the nine months ending with March 523,544 bushels of foreign wheat and no foreign wheat flour were re-exported; compared with 1,364,411 bushels of wheat and 102 barrels of flour in the corresponding period of 1891-2.

WEIGHING DEPARTMENT OF THE CHICAGO BOARD OF TRADE.

In Minnesota grain received at the principal markets is weighed by official state weighers. In most of the other central grain markets of the country it is weighed by the representatives of the elevator men only. In some markets a weighing department has been established by the board of trade or the commercial exchange, and in some elevators at these markets the grain is weighed and a record kept of it by a representative of the elevator proprietor and by a weigher from the weighing department. It must be admitted that grain received at railroad terminals should be weighed as well as inspected by disinterested experts. This work has been effected with less friction and better results in markets where the state has taken charge of the work, because it makes the service compulsory. The board of trade does not, so petty jealousies and bickerings often lead to a discontinuance of the service at some elevators.

Disinterested experts in the employ of an independent weighing department will do much good in the way of advancing the interests of the market by vigilantly guarding the interests of the country shipper, even if not stationed in every elevator. It matters not whether he succeeds in protecting the interests of the shipper, his presence in the elevator in the interests of correct weights will inspire the shipper with confidence in spite of any prejudice he may have against the market. Few of them are without prejudice, if they have been shipping long.

At Chicago the weighing of grain is done by elevator employes and employes of the weighing department of the Chicago Board of Trade. This department was established by the board in the early days of the city's grain trade, and has grown with the business until it now gives employment to about 55 in winter and 75 in summer and fall. The department is under the supervision of the weighing committee of the board of directors of the Board of Trade. The weighmaster who has charge of the department is appointed by the board of directors, and his work is subject to supervision by the committee.

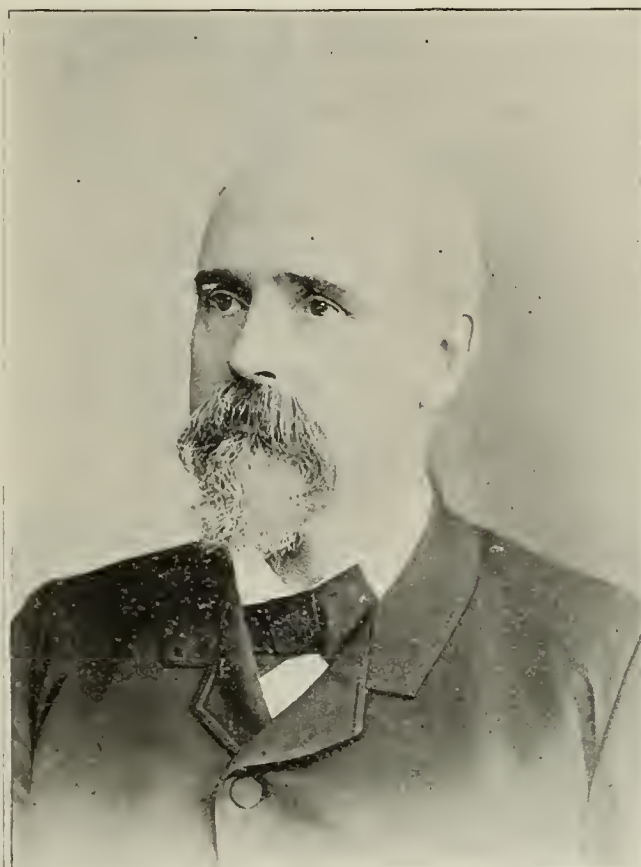
The Chicago Board of Trade Weighing Department at present weighs in 35 private and five public elevators, three transfer elevators, six grain transfer cars and at a number of the railroad yards. In the public and private houses, where the department weighers are stationed, grain is weighed by two weighers, who have separate books and make separate entries. In all places where the department weighs, this plan is followed and the separate entries are afterward compared. All grain transferred by hand from Western to Eastern roads is weighed on track scales by department weighers. The charge for weighing in the private houses is 50 cents and in the public houses 15 cents per car. The charge is paid by the receiver and buyer, each paying one-half. The department had men in most of the public elevators, but had to take them out because receivers would not give the necessary support. Efforts have been made to induce receivers to support the department by demanding department weights, but without avail. It cannot be that they consider the trifling charge extortionate. If shippers to this market would ask for department weights the receivers would not dare to refuse. That it is to the interest of country shippers to demand department weights is obvious. The board of directors of the Board of Trade have passed resolutions recommending that all weighing be done by Board of Trade weighers, but receivers did not pay any attention to it.

It is the practice of department weighers to give the elevators fair up weight only. Where hopper scales are used the weight is recorded by 10 pounds—nothing less. Ten pounds is the smallest amount of which any note is made. No fraction of that amount is recorded. On track scales the smallest fraction recorded is 50 pounds.

When anything is thought to be out of order the representative scale expert of the scale manufacturer is called in to inspect the scales. If a car arrives in bad condition, leaking or otherwise out of order, it is reported by the weigher. Cars are often received with ample evidence that grain has been thrown over the side doors by the shifting of the car. The weigh-

ers lay the blame on the inspectors, who knock off the side boards to get in to inspect the grain. If it is evident that grain has been stolen from the car, it is reported. Weighmaster Walker has repeatedly called the attention of western roads to the fact that inspectors were not replacing the boards removed to gain admission to the cars, but no effective action has been taken. Shippers should always kick vigorously whenever a shortage is reported, then all connected with the handling of the grain at terminals, and especially railroad officials, will guard more vigilantly the interests of the grain shipper.

When the western shipper complains of short weights on grain that is shipped through or transferred, the department secures the eastern terminal weights of each draft of that carload to verify the error or the weight recorded. If the complaint is received from the eastern receiver the draft weights of the carload made by the shipper are secured. About six months ago a Pennsylvania receiver reported a shortage of 10,000 pounds. The department sent to the western shipper for his weights on same car and he reported weights 200 pounds in excess of depart-



WEIGHMASTER JOHN WALKER.

ment weights. Grain for transfer is weighed on track scales by the following roads: Baltimore & Ohio, Illinois Central, Wabash, Ft. Wayne, Chicago & Eastern Illinois, New Albany & Chicago and Panhandle.

All weighmen concur in the recommendation repeatedly made by this journal that the weight of the grain loaded in each car should be recorded on two cards, and one tacked to each side door. Shippers should be very careful to have all holes stopped up and the top covering to car lining well secured, so that grain cannot get clogged between the lining and siding. Cars should be tightly and carefully coopered. An old car recently arrived at a terminal market which evidently had been loaded by a shipper who is always careful to cover the holes in cars. The holes, seven in all in this car, were each side of the doors, extending in a line across the car. The crazy patchwork indulged in by the man who coopered the car was intensely amusing. He had nailed blocks, about two inches thick, over the little holes, and these blocks had prevented the unloading of all of the grain with the power shovels. It may be that the blocks broke the shovels and jarred the shovel man in a way that irritated him. At least he left considerable grain in the car. With a stiff broom most of the grain remaining could have been removed without much trouble, but it was impossible to remove it with the shovels, so the shoveler left it. If scraps of tin had been used to cover the holes instead of scraps of scantling the shipper would have saved about five bushels of grain.

Care should also be taken to board up high the

doors, else much grain will be lost in transit by the shifting of the grain. If carriers were interested in giving good service they would do as the eastern roads do at Chicago. They furnish sound cars or else prepare them for grain. No road that is inclined to be just or fair to its shipping patrons would content itself with doing less. If all did this short weights would not be a source of so much trouble.

The practice of filling cars up to the line marked on the inside and then billing car at weight given as capacity on outside cannot be followed without resulting in many costly and ludicrous mistakes. One of the worst mistakes we have heard of in this line occurred recently. A shipper, without scales, was given an old style 28-foot box car, which had been fitted with new and heavy running gear. Originally it had a capacity of 28,000 or 30,000 pounds, but when the new trucks were put under it the capacity was marked up to 40,000 pounds. The shipper loaded up to the corn line and reported load at capacity marked on car. The shipper claimed 40,000 pounds. The department reported 31,270 pounds, which about agreed with eastern terminal weights.

Loading direct from farmers' wagons into cars has also caused some trouble. Usually when a load is short 50 to 75 bushels the department waits for following shipments from the same shipper and often finds that a car shipped about the same time as the first overruns about the same amount as the shortage claimed on the first car. This is easily explained.

Comparing weights recently reported by shippers to Chicago consignees with department weights, we find that billed weights sometimes agree and frequently are less than department weights. Following are some of the weights of recent receipts, the weight reported by shipper being given first: 32,000-31,100, 42,000-42,150, 41,150-41,250, 32,000-34,870, 33,920-30,750, 57,000-57,350, 39,000-39,500, 30,300-30,000, 32,000-38,200, 30,048-30,000, 32,000-38,250, 31,100-32,900, 41,280-41,200, 30,500-35,400, 38,400-38,150, 32,000-31,950, 36,768-36,930, 39,200-39,350, 40,000-39,500, 31,000-32,600, 30,800-33,750, and 24,000-36,900. A perusal of the foregoing figures will make plain to any shipper the reliability of capacity marked on cars.

The head of the Chicago Board of Trade's Weighing Department is Weighmaster John Walker, whose portrait is given herewith. He has been connected with the grain business for many years. Although born in Dublin, Ireland, May 1, 1831, he has lived in Chicago since 1850. His first connection with the elevator business was in 1857. From 1858 to 1868 he was foreman of the Iowa and the Lunt elevators. In 1868 he left Chicago and bought an elevator at Maroa, Ill., which he ran four years. Losing his children, he sold out in 1872 and returned to Chicago. From 1872 to 1887 he was in the grain commission business at Chicago, first with S. D. Foss & Co., and afterward in business for himself. In 1887 Mr. Walker was appointed to succeed Weighmaster John Wade, who was killed by the cars. He has held the position ever since and no doubt can retain it as long as he desires, as the directors seem to consider him a careful and conscientious worker. Last January he resigned, and it was only after a month's work that the directors succeeded in inducing him to withdraw his resignation. He has tried hard to have department weighers put in at every public elevator, but without avail.

Mr. Walker gives his personal attention to the supervision of the weighing and spends most of his time about the elevators, looking after the scales and the weighmen. His chief clerk in the department office, Board of Trade Building, is George Labeau.

Col. C. J. Murphy, the representative of American maize in Europe, has returned to this country for a few weeks' leave, and to enable Secretary Morton to confer with him in regard to his work abroad and the best means for its future prosecution. Col. Murphy speaks enthusiastically of the corn work in Europe, and feels especially encouraged by the interest aroused in Denmark on the subject. Moreover, the conditions existing there seem likely to be met with also in Sweden and Norway. Consequently he feels that he has struck a very encouraging field of labor in the Scandinavian countries.

OIL ENGINES FOR SMALL POWERS.

Satisfactory motors for small industries, requiring from fractions of a horse power up to about 10 to 12-horse power, and where the demand for power is of a decidedly intermittent character, have for years constituted a fruitful theme for discussion. Motors for such service have been turned out in almost endless array, comprising small, special makes of steam engines, gas engines, water motors and electric motors, and all these have achieved a fair measure of success. It is only during the last three or four years, however, that oil or petroleum engines have come into prominence in a practical way, notwithstanding the fact that their peculiar advantages have always been clearly recognized, and should long ago, it would seem, have tempted designers to produce them in marketable shapes. Spasmodic attempts, it is true, were made at different times to turn out oil engines which would satisfactorily meet practical requirements; but generally speaking, they ended in failure for some reason or other until quite recently when the matter seems to have been taken in hand more energetically. As a result, there are now quite a number of engines of this kind from which prospective users can make their choice, with a reasonably good assurance that they will obtain an engine which will supply their needs reliably and economically.

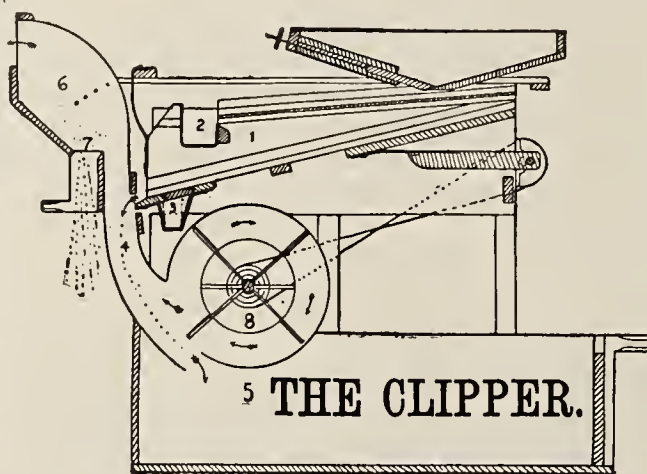
In order to prevent any misconception as to what an oil engine really is, it is well to point out that it is by no means a small steam engine taking its steam from a specially constructed oil-fired boiler. This impression of it we have found to be quite common among many; hence this statement which might appear to be entirely superfluous. As a matter of fact, an oil engine is one in which steam plays absolutely no part as a working fluid, but in which oil in a very finely divided state, together with a suitable supply of air, is introduced directly into the working cylinder and is there ignited. The oil engine thus, in all its principal features, bears a close resemblance to the now well-known gas engine, but has the distinct and at once apparent advantage over these that its use is not confined to localities where a gas supply is available, or that a special producer for the working fluid is dispensed with. It is evident, therefore, that an oil engine may be used anywhere, being entirely self-contained and independent of extraneous appliances or apparatus. How important an advantage this often is need hardly be emphasized. The user requires no boiler; there is no dependence upon gas works, either large or small, nor upon a water works furnishing water under pressure, as in the case of water motors; there is, in short, nothing to be provided except oil, and this can always be obtained with comparatively little trouble.

Many of the oil engines which are now on sale are built by firms which, for a larger or shorter time, have been in the gas engine business; and their oil engines are, in fact, nothing but slightly modified gas engines, the modifications having been made in the inlet valves which are generally poppet valves instead of the ordinary slide valves most frequently used in the gas motors. The favorite oil for these engines appears to be gasoline, which, to avoid fire risk as much as possible, is stored in small tanks outside the buildings in which the engines are running, the oil being taken from the tanks to the engines through small galvanized iron pipes. How small the fire risk attending the use of such engines and oil tanks, when properly arranged, is considered to be, is perhaps best shown by the circumstance that fire insurance companies do not consider them noteworthy, and permit their use without charging extra premiums. Instead of the rather inflammable gasoline, however, ordinary

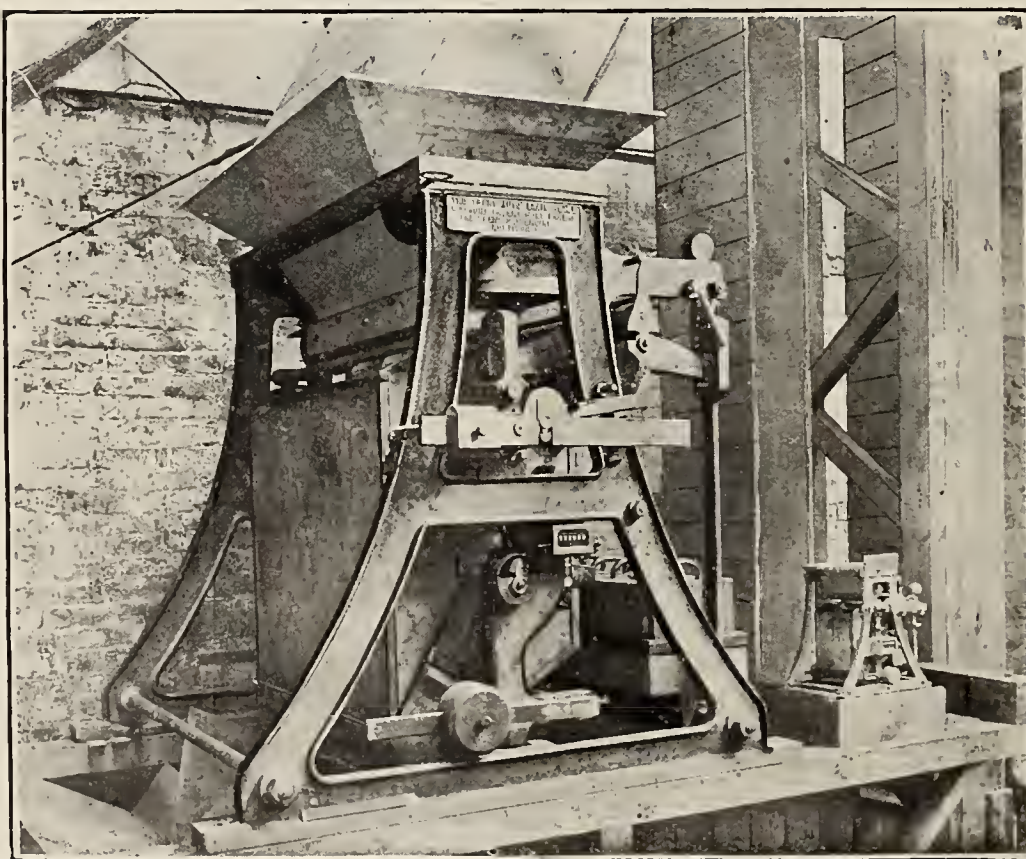
petroleum is used with good results in many engines. Taken altogether, the oil engine finally appears to have become a fixture in the market; and instead of again dropping out of sight, we may rather look, with good reason, for its further development and widely increased use.—*Mechanical News.*

THE CLIPPER CLEANER.

The Clipper Mill, of which we herewith give a sectional view, is claimed to be a perfect grain and seed



cleaner. Its vertical blast is said to give the best results. In the illustration *Fig. 1* represents the shoe with two grooves which receive sieves. *Fig. 2* is spout for straws and dirt. *Fig. 3* is a screening spout. *Fig. 4* is a vertical shaft, up through which the air passes. The grain passes down through this shaft and out at *Fig. 5*. The dust hood at *Fig. 6* has a cross stick, represented in cut by dotted lines, against which the light and imperfect grains strike and drop through the opening 7. The dust, chaff and light stuff is blown out at the top opening. The fan is run



THE TRENT AUTOMATIC SCALE.

by a belt on a cone pulley, which permits changes to be made for different weights of grain.

The Improved No. 5 Clipper mill, it is claimed, clean all kinds of seed from cabbage seed up to corn. It is equipped with the best babbitt boxes and will run a long time without repairs. Eight of the nine sieves used in this mill are made of perforated zinc. This mill is made especially for elevator use. The No. 10 mill is made especially for flax and has large capacity. The manufacturers of these mills, Ferrell, Prame & Ozier, have recently located in Saginaw, Mich., where they have a large, new and well-equipped factory.

A bushel of wheat is carried sixty-six miles for one cent over the leading American railways.

THE TRENT AUTOMATIC SCALE.

A self-acting grain scale designed on the principle of the equal-armed beam has been placed before the public in the invention of R. Simon, an English engineer. The illustration which is given herewith shows two of the scales, one small, of one ton capacity per hour, and one large of ninety tons capacity per hour, placed close to a stand of elevators from which its load is received.

The Trent Automatic Scale is used for wheat, corn, oats, rye, barley, malt, rice, paddy, seeds, cement, etc., and all other granular substances. Besides weighing the scale may also be set so as to make one delivery per hour or four to five per minute. This feature is very valuable where it is necessary to avoid overfeeding a receiving machine. To regulate the number of discharges a simple arrangement is used, which is made under patent by the manufacturers, who also claim that the Trent Scale is the only automatic scale that can be so regulated. While the margin of error in weighing by hand is given at 6 per cent, the Trent Automatic Scale, it is claimed, has a margin of error of only one-fourth-thousandth. Each weighing is registered on a dial in bushels or centals, etc., so no clerk is needed to keep tally. To insure durability and reliability the makers have avoided a multiplicity of moving parts. The moving and wearing parts are few in number and their travel is the least possible. If blown away occasionally dust has no effect on the working of the scale. Steel and cast steel are used for the smaller parts. When needed, which is seldom, the weighing can be regulated by a sliding weight in a few seconds. Little floor space is required by the machine, and as the discharge is central and immediately beneath the feed hopper it can be conveniently placed to receive and discharge the substance to be weighed.

While filling the vessel is securely locked in a vertical position, as it is shown in the illustration. The grain or other material enters by the funnel-shaped mouth until the greater part of the charge has run into the grain vessel, when a flap or valve closes and the remainder passes in thin streams, taking the place of sprinkling by hand. The discharge port is meanwhile held closed by a flap hinged to the grain vessel, and resting on it by its own weight. When the exact weight required has entered a second valve closes the inlet entirely, and then, by its own weight, releases the grain vessel. The grain vessel then rocks a few inches forward and inward, and the flap, being held back by stops on the frame, uncovers the discharge port, whereupon the grain quickly runs out. The grain vessel then at once returns to its original position, on its way taking up the flap which closes the discharge opening. The return of the grain vessel re-opens the inlet valves, after the discharge opening has been closed, and records the weighing, and a new weighing immediately commences.

Further particulars may be had upon application to the manufacturers, the Trent Gas Engine Company, Limited, Nottingham, Eng.

Cotton seed, amounting to 247,723 pounds, was exported in March, against 1,338,270 pounds in March, 1892; and during the nine months ending with March 3,845,355 pounds was exported, against 10,805,189 pounds during the corresponding period of 1891-2.

Timothy seed, amounting to 1,705,955 pounds, was exported in March, against 1,859,212 pounds for the preceding March; and during the nine months ending with March the exports of timothy aggregated 4,648,702 pounds, compared with 7,649,868 pounds during the corresponding months of 1891-2.

HAY TRADE ABUSES.

As was announced in our last issue the Hay and Straw Dealer's Association of New York state held its fifth annual meeting at Syracuse. Among other addresses made was one by F. F. Favor from which we take the following:

Perhaps my remarks may take on a fault-finding tone. However, we are not whining, but are trying, in a reasonable way, to bring about some needed reforms. Mind you, I take the position of a receiver of hay in the crankiest market on this continent, which is not very complimentary to old Boston, but I dare say, some of you can vouch for the truth of it.

First in my mind, is the wood pile. When I was a boy, way down in Maine, we had wood piles bigger than the houses, and we boys had our stint to chop it up before spring work began. You can rest assured that we had no love for it. In fact, we hated the sight of it; and when I left the farm, I made up my mind that whatever I did, I would never have anything to do with any more wood piles. But circumstances led me into the hay trade, and wherever I go the wood pile is there. It is thrown in my face at every turn. If I go to a customer, he has a big bundle tied up for my inspection with the discount figured out from my bill and for the sake of peace in the family, I must allow it, and I assure you these thiggs are far from pleasant.

My father thought his wood lot was better than money at interest but I never quite agreed with him, until I struck the grain trade. I now think, the wood lot, beats the milkman's pump, two to one.

Now gentlemen, is there any reasonable argument in allowing wood on hay? It is high time that something should be done about it, and I believe the state of New York can get more for her hay crop without the wood than she can with it, and there seems to be no good reason why it should be used.

The marking up of weights on bales is another thing that is a drawback, that should be stopped. It is not right, and too many good men are engaged in it. The curing of hay is another important thing, and great good may be accomplished by dealers in sending instruction in pamphlet form among the farmers, telling them how, to preserve the color. I venture to say that not half of the farmers know how it is done. If they could be shown how much they would be benefited, many would have prime hay that now have only No. 2. A few years ago prime butter was the exception rather than the rule. Since then the farmers have been taught how to feed the cows, and handle the milk, cream and churn, and now fully 50 per cent. of the butter going to market is considered prime. The same result can be accomplished in hay if it is looked after. Advocate feeding the ground, silo, more hogs, more cows, and prime hay will be the result.

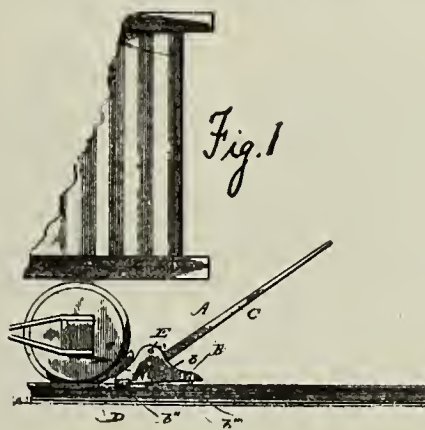
Hay caps are another indispensable article; costing a little but lasting a long time if cared for. Another thing we must go for, the shippers of this country pay more for freighting hay than they ought. Can we not prevail upon the railroad companies to build more hay cars and have them large and roomy, so we can get ten tons of loose pressed hay in them. We are losing too much during the spring and summer on account of hard pressed hay heating, as buyers refuse it except at low price. This matter of freight is a serious question. We Eastern people are obliged to pay freight on a minimum of 20,000 pounds when the actual weight may not exceed 16,000. All right-minded men are willing to pay freight on actual weight, but the railroads play "heads I win and tails you lose," and no organized effort is made to stop it. We cannot drive them, but we can coax them into doing what is right by us. The method of doing business in hay has changed, the same as everything else. A few years ago the grain sold in Eastern markets was all on commission. The same in potatoes, butter, eggs, cheese, etc. To-day three quarters of these products are bought directly from the country dealers by the city trade, and it is the most satisfactory method, but what makes it difficult on hay is the different grades in every market in the country. The firm I am connected with buy and sell entirely by New York rules, and it works much better than our Boston system. In fact, we have no system, and I doubt very much if our Boston inspector could grade the same car twice alike;

but they wrestle with it the best they can, and they are not to blame. It is the hay traders themselves. They make no effort, for what reason I cannot say, but all agree that something should be done, but that "something" they leave for some one else to act upon, and we drift along in the same old way. What we want is to find dealers that will start a new order of things and will enforce them, and live up to the "golden rule." There is a great deal more money in this way than to be trying always to get the last cent.

Now gentlemen, let us put our heads together and correct, as far as we can, the little abuses that have crept into our method of doing business. I have no motion to offer, only suggestions, that it seems to me ought to be worked out to the mutual advantage of all people in the trade.

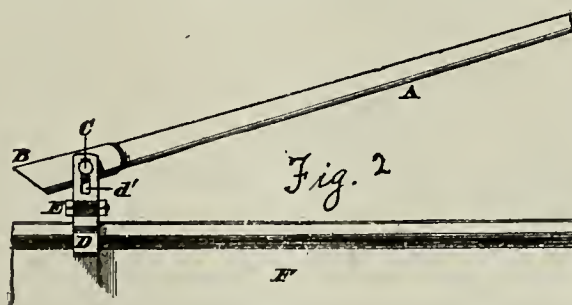
TWO NEW CAR PUSHERS.

Among the patents recently issued for car movers are one to Solomon C. Chase of North Baltimore, O., and one to Jacob Ripberger of Newport, Ky. Mr. Chase's patent is shown in *Fig. 1*, given herewith. It consists of the lever *A*, base *B* and thrust block *F*. The lever is fulcrumed in the base, and its short arm



bears on the thrust block at *F*. The base is guided along the rail by the lugs *b''* one on each side of the rail, while the sharp cross piece *b'''* cuts into the rail and prevents slippage. The thrust block *F* is also furnished with a sharp cross rib *e* to cut into the car wheel to prevent its slipping.

Ripberger's patent is illustrated in *Fig. 2*, given herewith. The lever *A* is fulcrumed on the pin *C* in



the slot *d'*. The support is made in three parts, consisting of a pair of jaws *D* and the bolt *E*. When the toe *B* is placed under the car wheel and the end of the lever depressed, the pin *C* sinks down in the slot, and the thickness of the lever spreads the upper portion of the jaws apart, causing the lower portion *D* to firmly grasp the rail.

Grain dealers who get married should let us know it. We promise that notice thereof shall not be published under the head of "Casualties."

Oats, amounting to 1,747 bushels, was imported in March, compared with 1,615 bushels for March last year; and for the nine months ending with March 11, 250 bushels was imported, against 12,783 bushels for the corresponding period of 1891-2. No foreign oats were re-exported for the nine months, compared with 6,025 bushels for the nine months ending with March, 1892.

Malted barley, amounting to 5 bushels, was imported in March, against 797 bushels the preceding March; and in the nine months ending with March 2,496 bushels was imported, against 4,923 bushels in the corresponding period of 1891-2. No foreign barley was re-exported in the nine months ending with March, against 1,191 bushels in the corresponding period of 1891-2.

GRAIN FROM KANSAS CITY TO NEW ORLEANS BY BARGE.

The New Orleans *Picayune* says: Kansas City, Mo., has contributed a very large proportion of the grain exports from New Orleans during the past season, and it is evidently the firm purpose of the merchants of that enterprising Western mart to still further increase its trade intercourse with this city in the future.

There has just arrived by the barge line from St. Louis a shipment of 1,500 bags of corn, which has come all the way from Kansas City by water. This corn was shipped by boat down the Missouri River to St. Louis, and was there transferred to the barge line for transportation to this city. This is therefore the pioneer of all-water shipments, and the result has been so gratifying that shipments on a much larger scale will now come forward.

Other shipments are now on the way from Kansas City to New Orleans by water, and as soon as arrangements are completed a large amount of grain will come direct to New Orleans from Kansas City in barges without transferring at St. Louis. It is expected that barge transportation can be maintained during three months of the year, and when the Missouri River has been improved by the government a much longer period of open navigation is looked for.

Then an all-water route via the Missouri River to Kansas City would be of great benefit in making favorable freight rates to New Orleans is already proved by the fact that the first shipment, which has arrived during the past few days, came on a through rate of 16 cents. Of course, the all-water route not being open the year round can not be expected to deprive the railroads of their full share of the traffic, but the cheap rate that the water route will afford will unquestionably regulate rates southward and besides induce a large amount of grain to come in this direction which now seeks other outlets. It would, in fact, furnish New Orleans with another powerful lever to force the bulk of the grain movement in this direction.

The people of Kansas City are deeply in earnest in their effort to secure an all-water route, and they are determined to knock at the door of Congress until the improvement of the navigation of the Missouri River is an accomplished fact. As this city will benefit greatly by the opening of the river to barge navigation, our merchants will without doubt extend moral support to their Western friends in their efforts to secure the benefits of water transportation.

GOOSE WHEAT.

Mr. Samuel Rowe, Greenway, Man., writes: "In looking over the quotations of Toronto wheat market I was surprised to see such a small difference in the price of spring wheat and goose wheat, spring being quoted at 60 cents a bushel and goose from 55 cents to 58 cents. I have been experimenting for the last three years on a small scale with goose wheat and have come to the conclusion if our Manitoba buyers will pay as much in proportion as the Ontario buyers do for goose wheat, that I can make more money growing goose wheat than with Red Fyfe. I have planted it on the lowest and heaviest land on my farm in order to test its frost-proof qualities and have yet to see the first sign of frost on it, while the Red Fyfe was so badly frozen in 1890 that all it would bring was 25 cents a bushel, and again my crop of Red Fyfe graded No. 1 Regular in 1891. Last year my crop escaped the frost, but I may say last spring I sowed the goose wheat under the most unfavorable conditions; the ground was so low and wet at this particular spot the horses were very nearly mired, and still there was a very fair crop. I think if goose wheat is given as good a show as the Red and White Fyfe it will yield enough more to the acre to make up the difference in price. I do not want you to understand me to mean for every farmer in Manitoba to grow this particular kind of wheat, but I say that those who are on heavy, strong land like myself, are running a far greater risk of having their crops destroyed by trying to grow either of the Fyfes than they will by growing the other. The cry used to be, the goose wheat was too hard and the miller could not make good flour from it, but that day is past now since the steaming process is brought into use."

RUSSIAN GRAIN PRODUCTION.

There has long been current the belief, founded upon baseless statements set afloat by the British commercial press and by parties in this country who were interested in depressing the price of farm products, that Russian production, especially of the bread-making grains, was increasing at an enormous rate, when the truth is that Russian production of such grains long since ceased to increase, and while the wheat acreage is now barely as great as it was fifteen years ago, the acreage in rye has shrunk two million acres in the same period. Astonishing as it may appear, the acreage devoted to staple food and forage crops—other than hay—has, in Russia, decreased by more than 1,500,000 acres since 1872, with but slight probability of an increase in the immediate future. Up to the earlier part of the eighth decade Russian grain fields continued to expand, and so great had been the development that in many of the black-earth

tracts are being reclaimed from forest and morass, but such lands are mostly of low fertility and barely sustain the cultivators.

While Russian population is increasing about one and one-third per cent. per annum, production, if increasing at all—that is, cereal production—increases so slowly that Russian statistics fail to show it, and Russia's augmented exports are wholly due to the increasing poverty of the Russian cultivator.

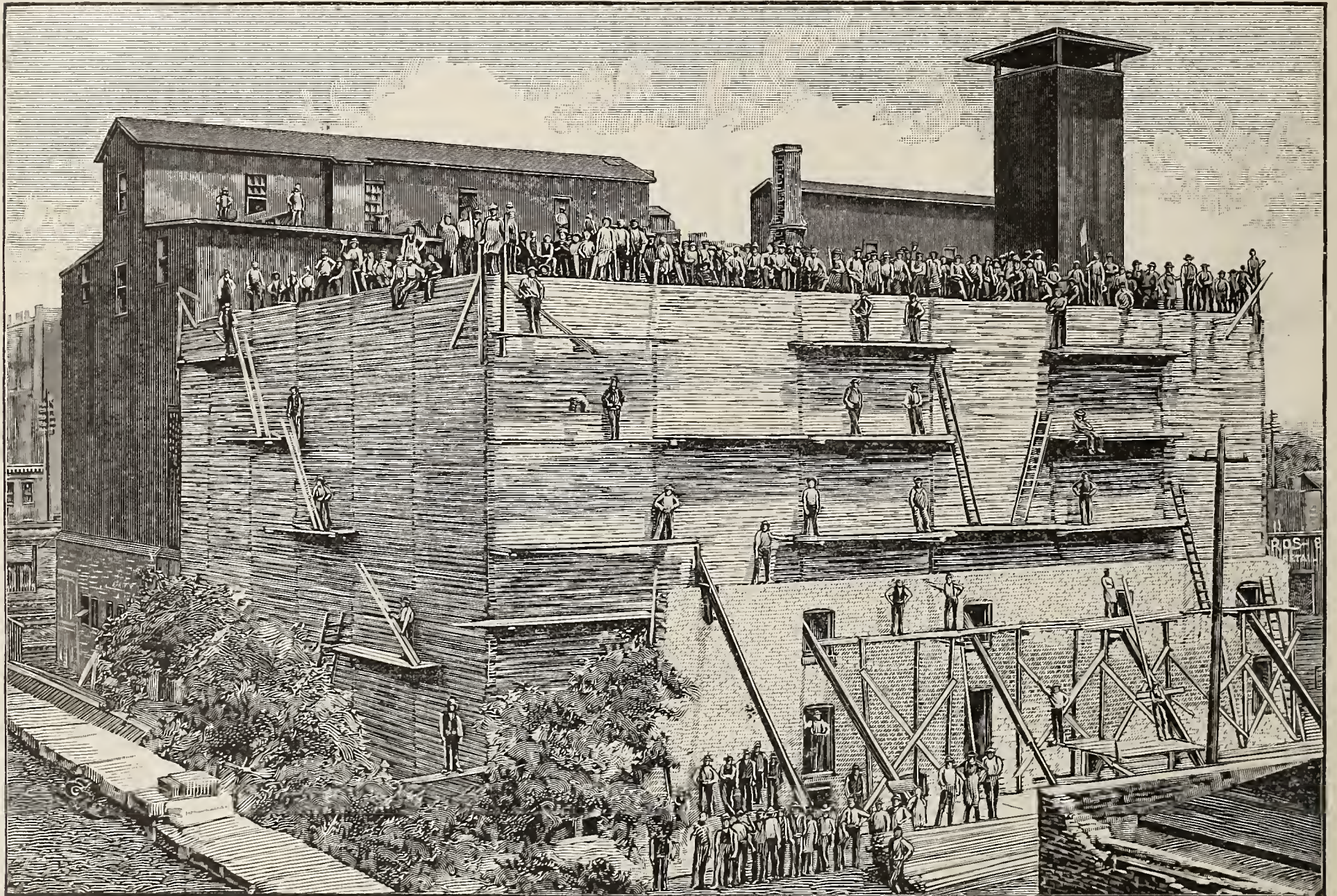
QUICK CONSTRUCTION OF ELEVATORS.

The haste to build and complete elevators in Chicago during the threatened corner in May wheat calls to mind a like occasion in the spring of '87. The demand for storage room became so urgent in May of that year that the E. Hess Elevator Company determined to erect an annex to Hess Elevator "A." Accordingly work was begun June 2 and prosecuted

SHIPPING GRAIN IN SACKS.

The *Crookston Tribune* has discovered a corrective for all abuses in wheat hauling and handling, that it thinks will put the farmer on top. It is simply to sack it and sell it by the cental. Here is the idea in all its coloring:

Why may not the vexatious problems of grading, shipping and selling wheat in the Northwest be solved by shipping it in sacks instead of in bulk and selling it by the cental instead of by the bushel? The advantages of such a method are many. It would compel the railroads to provide for the loading of wheat as of other freight, and make them responsible for the safe delivery in good order of every sack received, as they are now responsible for all kinds of freight save that shipped in bulk. It would enable every farmer who so desired to ship his wheat to a terminal market, and it would be his wheat, unmixed with any other man's wheat, until it was sold. There would need be no



ANNEX TO HESS ELEVATOR "A" AT CHICAGO, IN PROCESS OF CONSTRUCTION.

provinces the area under the plow in annual crops reached 66 per cent., and in a number of the provinces it was as high as 76 per cent.—as it was in the Polish provinces.

We can appreciate the complete occupancy of these districts when we remember that Illinois has but 40 per cent. of its area in staple crops other than grass, and that no other state in the Union has so large a proportion. Russian grain fields have given place to the forage needed by the increasing number of animals, and to such crops as are required by a population that is increasing faster than any other in Europe and that does not emigrate. It is true that there are vast tracts of unoccupied land in European Russia, but they are of very low fertility, covered by almost impenetrable forests, or are impassable morasses, or lie so far north as to preclude cultivation. So very complete is the occupation of the fairly fertile soils of Russia, except in the extreme southeast, that there is much land in cultivation that does not produce enough to pay the taxes, and the occupants work elsewhere to earn sufficient to make up the deficit. Small

with such expedition that in the remarkably short space of two weeks the whole was complete from foundation to roof.

The busy scene is well portrayed in the illustration which is given herewith. A small army of men was employed. Every stick of timber was handled by manual labor. By carrying on the work of erecting the cribbing at the same time that the foundation was put down the hour of completion was hastened by many days. In a fortnight a building 90x100 feet and 70 feet high, having a storage capacity for nearly a half million bushels of grain was finished, with elevators and 700 feet of conveyors complete.

Barley, amounting to 161,111 bushels, was imported in March, against 189,762 bushels in the preceding March; and for the nine months ending with March 1,801,694 bushels was imported, against 2,815,282 bushels for the corresponding period of 1891-2. Of foreign barley 33,983 bushels was re-exported for the nine months, against 156,698 bushels for the corresponding nine months ending with March, 1892.

grade for such wheat, for it would be sold wholly on its merits, and when the system of grading wheat is destroyed, the occupation of gamblers and wheat combines would be gone. If wheat could come into market as suggested, there would come at once the deserved reward to the farmer who raised the best wheat and cleaned it most thoroughly. It would enable the farmer to make a reputation for his brand of wheat, as great millers and other manufacturers secure reputations for specific brands, and profit enormously thereby.

Russia does exactly that thing and why should not we? American farmers might even go farther and plow with a stick, as their Russian and Indian competitors do. Yes, plow with a stick, sack the grain and sell by the cental and the thing is done.

New Orleans exported 610,205 bushels of corn and 1,323,230 bushels of wheat in April, according to the report of Robt. McMillan, chief inspector, compared with 1,718,143 bushels of corn and 1,801,555 bushels of wheat in April, 1892.

A FEAT IN ELEVATOR BUILDING.

The most wonderful work of modern times in the line of elevator building is the construction of Armour's new storage elevator, the largest elevator in the world, in the short period of 33 days. The builders were anxious to have the house completed in time to receive wheat for delivery on May contracts. Work was commenced April 1 and by the light of 50 electric arc lights the work of construction was carried on at night. Six hundred men worked at night and 900 during the day. Carpenters were quickly imported from all the surrounding towns. On May 3 grain was run into the new storage house from Armour's old elevator and in less than a week from its completion it held over 1,000,000 bushels of wheat.

belts. Those at top are equipped with self-moving automatic trippers.

Beside the track in east end of the house are six receiving sinks, six pairs Clark's Power Shovels, supplied by the H. W. Caldwell & Son Company, six bifurcated loading spouts and one Pease Hercules Power Car Puller. Six elevators take the grain to the top floor, four of them have an elevating capacity of 7,000 bushels per hour each, and two have an elevating capacity of 13,000 bushels per hour. They are driven with Robinson's latest improved patent single leg rope transmission, and can be stopped or started from the ground floor.

Six pairs of twin scales on the top floor receive the grain direct from the elevators. Each scale has a weighing capacity of 72,000 pounds and is equipped

or can carry grain both ways at the same time. Grain can be received in Armour's old house from cars and elevated 30 feet onto the cross conveyor to the new house, or can be received by novel marine leg in old house and conveyed by new belt conveyor to either belt conveyor running to new house.

The house is lighted by 300 incandescent electric lights and equipped with speaking tubes, electric bells and a passenger elevator. Being a public elevator, no grain cleaning machinery will be put in, although there is room for 18 cleaners on the ground floor. The house is equipped with all modern conveniences and is considered one of the best storage elevators in the world. The entire roof is covered with John's Asbestos Fire Proof Roofing, consisting of layers of four-ply felt, flax, gravel, tar paper, gravel and tar.



ARMOUR & CO.'S NEW ELEVATOR AT CHICAGO. FROM PHOTOGRAPHS TAKEN APRIL 3, 17, 24 AND 30.

The main building is 234x278 feet and 75 feet high. A cupola, extending the full length of the east end, is 50 feet high. The cribbing used in the construction of the bins was 2x10, 2x8 and 2x6 inches. The storage bins, which have flat bottoms, are 168 in number and have a total storage capacity of over 3,000,000 bushels; all are of the same size. Forty-one hopper bins have a capacity of 8,000 bushels each. The total capacity of the house is 3,680,000 bushels. The house is built entirely on the most approved plan of modern elevators.

On the first floor are six conveyor galleries, extending full length of building, and on top floor of storage part are six conveyor belts, extending to the west end of building. A cross conveyor belt on top floor, which may be run either way, can convey grain from any elevator head to any conveyor belt running length of building. The conveyors are all 10-inch rubber

with latest improved recording cheek beams. Each elevator head is equipped with the Metcalf Switch Valve, so that an operator on the ground floor can turn grain from head to either of two scale hoppers at its side. Grain is distributed from the scales to the bins and belt conveyors by 12 Simpson & Robinson Patent Distributing Spouts. Grain can be taken from any sink in the house direct to any bin in the house and loaded from any bin through any loading spout with one elevation. The bins are 75 feet deep, and above them, under cover, is 600,000 cubic feet of space, well lighted and aired by windows in roof and sides. Two conveyor chutes connect the new house with Armour's old elevator. Each is about 30 feet above the ground and has passageway for operatives. The conveyor belt in each has a carrying capacity of 13,000 bushels per hour, and each is so arranged that it can carry grain each way without reversing its motion

The sides of cupola are covered with galvanized iron roofing and the sides of the building with steel siding.

Power is supplied from two plants. The new house has a power plant of its own, which consists of twin compound engines of 300-horse power. Power is also supplied from old house, which has a 1,200-horse power fore and aft Corliss Compound Valve Motion Engine. To the end of the main shaft of this engine another but smaller shaft was coupled, and on this shaft was placed a 14-foot 22-groove sheave pulley, 16 strands of 1½-inch manilla rope pass from this sheave through the south conveyor chute to the new elevator and propel its elevators, conveyors, car pullers and shovels. Six other strands from the same sheave convey power to the cross conveyors. The belting was supplied by the Chicago Rubber Company.

The house was planned and constructed by the Simpson & Robinson Company, elevator architects

and builders of Minneapolis, who make a specialty of short time contracts. Although four or five expert elevator builders were employed on the work, the construction was superintended by D. A. Robinson in person. Eight million feet of lumber was used in its construction and one million feet was put into the building during one day. This is claimed to be the largest amount of lumber ever put into one building in one day. Four hundred thousand pounds of nails were used.

Twenty-five men are employed in the new house and 50 in the old house, making 75 men in all. The new house and divisions "A" and "B" are each in charge of a foreman, and the entire plant is in charge of Superintendent M. W. Hanley, one of the oldest and most popular elevator men of the country. He has been in the elevator business 25 years and thoroughly understands his business. The grain storage plant now under his supervision has a capacity of nearly 6,000,000 bushels.

DIRECT SHIPMENTS BY FARMERS.

We believe that everyone should attend to his own business. This saying is usually aimed at those who are inclined to be meddlesome, but we use it in this instance in a very different sense. Farmers, for years past, have been justly complaining of the meagerness of the returns for their produce, and they have had much to say about the extortionate charges and profits of middlemen. The middlemen are not to blame. Every person must live by his business, and every hand through which an article of produce passes must retain enough of that produce, must toll it sufficiently, to make him and those who depend upon him a living, and generally a far better living than that of the man who produced the article, and first owned it all. This, we repeat, is not the fault of the middlemen; it is the fault of the method of getting to the market, and the producer, who should be the original shipper, is the only one to blame for the method. The producer can ship to the general market just as easily and just as safely as can the local purchasers. In doing so he may save all the tolls between himself and that market.

We have time and again urged our readers to do their own shipping, and thus get all the market is worth. There are many good and responsible houses in all our market centers, who will gladly receive such shipments, and place them with the same care and honesty, and to just as great an advantage, and make just as prompt returns as they do to buyers and shippers. And more, they prefer direct shipments, and do all in their power to give instructions to producers as to how to ship, etc. We urge this in the interest of two important classes, the producers and consumers, both of whom suffer from the multiplied tolls taken between the production and the consumption.

We concede that small farmers, those who may not have a carload of any one product, are not so well situated to make their own shipments as are those who produce more, but this difficulty may be easily overcome by clubbing. Our lodges here step in and overcome this difficulty. All that remains, then, is for farmers to be a little less selfish, to have a little more confidence in each other, grow products of a uniform quality, prepare them for shipment with like honesty, and then share the full benefit of the final market.

All that remains to be said is that if farmers are not willing to comply with these conditions, when the opportunities are so clearly and so plainly given, then they should quit complaining at the extortions of middlemen. As a further argument, we refer to the full page advertisement of Messrs. ———, on the last page of this paper, and ask our friends to write these gentlemen about making shipments, and learn to depend upon yourselves—learn to attend to your own business, and thus get the pay that goes to employ others to attend to it for you.—*Progressive Farmer*.

Mexico took 199,938 bushels of our corn in March, against 100,563 bushels in March, 1892; and in the nine months ending with March the exports to that country were 5,496,366 bushels, valued at \$3,576,497; against 359,039 bushels, valued at \$242,930, in the corresponding months of 1891-2.



[We invite correspondence from every one in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

WANT GOOD MILLING WHEAT.

Editor American Elevator and Grain Trade:—We want to buy about one car of good milling wheat per week and hope the grain dealers will put our name on record.

Yours, W. O. WARE & SON.
King's Mountain, N. C.

WANTS CAR OF SPRING WHEAT.

Editor American Elevator and Grain Trade:—I would like to buy a car of spring wheat and would be glad to have my wants known to the grain dealers that I may learn prices from various dealers.

Yours very truly, T. W. SHAUGER.
Leaf River, Ill.

WILL BUILD ELEVATOR.

Editor American Elevator and Grain Trade:—I am going to build an elevator at Beaver, Ia., this season. Please send me the AMERICAN ELEVATOR AND GRAIN TRADE for one year, commencing with the April number.

Yours truly, C. W. SMITTLE.
Grand Junction, Ia.

FAVOR DISCONTINUANCE OF LENDING BAGS.

Editor American Elevator and Grain Trade:—We notice in the issue of your journal for April 15 that the grain dealers of Madison Co., Ind., had agreed to discontinue loaning bags to farmers. We are dealers in Madison county, but know nothing of such action, and we stand ready to enter any such arrangement.

Very truly, TAYLOR & BROWN.
Pendleton, Ind.

COULD NOT GET BUCKWHEAT.

Editor American Elevator and Grain Trade:—You were very kind to put the inquiry in the "Queries and Replies" column; however, I guess no one had any buckwheat to sell. I stopped grinding it about the middle or last of February, as I could not get the grain. I have had a very satisfactory feed trade. I am figuring a little now on getting a gasoline engine.

Yours, T. G. WHITE.
Marion, Ia.

SAMPLING AT MILWAUKEE.

Editor American Elevator and Grain Trade:—Grain arriving at this market is sampled by men in the employ of each firm, subject to inspection by sample by the Chamber of Commerce inspector. The work is done by experts and is generally satisfactory. It might be done more economically by a bureau, but this would not be likely to be as satisfactory. The names of the principal commission merchants here who receive and sell by sample are E. P. Bacon & Co., Robt. Eliot & Co., L. Bartlett & Sons, Mohr-Holstein Commission Co., John Foley, Jr., C. F. Freeman, Owens Bros., A. F. Luening, J. H. Lowry & Co., and Bauman Bros.

Yours respectfully, W. J. LANGSON,
Secretary Chamber of Commerce.
Milwaukee, Wis.

SHORT WEIGHTS AT CHICAGO.

Editor American Elevator and Grain Trade:—I see the AMERICAN ELEVATOR AND GRAIN TRADE is a stout advocate of "clean" bills of lading. Every country shipper ought to support it in its views. The writer has taken a solemn oath not to ship any more flax to Chicago until he can get honest weights in that town. For the last two years my shipments to Chicago all ran short from three to five bushels per car on the gross weight. I have made a number of claims to the railroad company, but can get no satisfaction or pay. All of my shipments last year were made in brand

new cars of the C. & N. W. Ry. Co., and there was no chance for leakage.

I have shipped a few cars to St. Paul and Minneapolis and got full weights. There is where my flax will go in the future.

Now, would it not be policy for the C. & N. W. Ry. Co. to do something to stop the thieving in Chicago? Of course it will only get a small part of the freight when I ship to St. Paul and Minneapolis compared with getting the whole haul to Chicago, so it loses then. Then the railroad company collects freight according to weights returned to me. Now if I am robbed from three to five bushels per car the railroad company also gets robbed of the freight for the same amount, or in this case about 50 cents per car, taking an average of a four-bushel steal. I have learned from other buyers shipping flax to Chicago that they have the same complaint. Railroad companies are considered the shrewdest class of corporations managed by business men. In this case they seem to be blind. I can see no other remedy to protect myself but to stay away from Chicago and this I shall do.

Competition among country buyers is such that it is impossible to come out whole in weights if we have to stand such robbery.

C. W. GEORGE.

Redwood Falls, Minn.

WHIPSAWED.

Editor American Elevator and Grain Trade:—Since I went into the grain and feed business here in New York some years ago I have become aware of the fact that some Western shippers are only too anxious to take advantage of the Eastern buyer. At first I did not notice these tricks, and when I was made a loser by them I judged that they were caused by accident. But repeated performances of the kind gradually opened my eyes to the fact that they were caused not by accident, but by design; and now when I order grain shipped from the West I can almost invariably, by watching the fluctuations in the Western market, tell whether the shipper or commission man will send me a large or a small carload.

When the market is unsettled and prices are fluctuating I have noticed that the commission man of this stamp never ships promptly. At such times he manages to keep on hand several different orders from different buyers in different parts of the country made at different prices on different days. Out of all these differences he schemes to make himself a profit, and often makes it off me. I know how he does it in my case. When I order carloads of corn I sometimes get as little as 500 bushels to the car and sometimes as much as 800. When the price has gone up since ordering I get small cars, and when it goes down I get large cars.

As I understand it the commission man on receipt of my order buys four cars of corn from a country elevator man to fill my order and also four additional cars from another elevator man, one lot containing 500 bushels per car and the other 700 bushels. He holds the cars a few days until the price has gone up or down 2 cents, more or less, per bushel. In case the price has gone up he consigns the small cars to me and the large cars to a party that bought later and at the higher price. In case the price has gone down he reverses the operation, shipping the large cars to me and the small cars to another party who ordered earlier at the higher price. A handsome profit is thus made without any risk.

Now some persons may say that as I ordered four cars of corn at a certain price and received them in due time I ought not to complain, but the fact of the matter is that when I buy grain that may take two weeks to arrive I take the risk that the price may fall in the meantime and the grain not be worth so much as I paid for it. As I have to take the risk I am entitled to the profit. Since I must bear the loss, if any, I also ought to have the gain, if any is due to the fluctuations in prices. The commission man, who merely sits in his office and receives and sends telegrams, ought not to make a profit on my loss. I leave it to any fair-minded reader of the AMERICAN ELEVATOR AND GRAIN TRADE.

Now I do not want to be understood as wanting to drive commission men out of business. Middlemen are very useful in business. Occasional buyers like myself can save time and trouble by buying through

commission men; but the middleman should be satisfied with the regular margin. What do other readers think about this?

Yours respectfully, HUDSON.

OUR BOSTON LETTER.

Editor American Elevator and Grain Trade:—Prices have ruled low and business poor the past month in the Boston market. The receipts of corn and oats were about 100,000 bushels more than for the same time last year, but most of the corn was for export, very little of it being used locally. Export demand has been fairly good, especially hay, the exporting of which has grown to be quite a factor in this market. Feeds have ruled low with little demand. Receipts of hay and straw for April were 738 ears more than in the same time last year and 38,066 bales of hay were exported.

RECEIPTS FOR APRIL.

Articles.	1893.	1892.
Cotton Seed Meal, bushels.....	33,572	2,600
Corn, bushels.....	464,496	387,146
Wheat, bushels.....	40,626	716,770
Oats, bushels.....	572,894	446,243
Rye, bushels.....	445	7,534
Mill Feed, tons.....	1,108	1,637
Oatmeal, sacks.....	6,051	3,155
Oatmeal, barrels.....	2,020	3,699
Cornmeal, barrels.....	13,969	17,581
Barley, bushels.....	5,445	11,902
Malt, bushels.....	110,825	118,730
Peas, bushels.....	2,467	58,915
Hops, bales.....	238	330
Hay, ears.....	1,650	1,003
Straw, ears.....	127	36
Flour, barrels.....	115,968	139,371
Flour, sacks.....	229,402	111,093

EXPORTS FOR APRIL.

Articles.	1893.	1892.
Wheat, bushels.....	27,436	873,382
Corn, bushels.....	248,823	41,424
Oats, bushels.....	77,045	161,229
Peas, bushels.....	3,582	58,005
Rye, bushels.....	30,322
Barley, bushels.....	11,193
Buckwheat, bushels.....	28,736
Cornmeal, barrels.....	7,583	7,463
Oatmeal, barrels.....	1,243	452
Oatmeal, sacks.....	4,736	3,740
Flour, barrels.....	62,585	41,855
Flour, sacks.....	265,772	126,667
Mill Feed, tons.....	6,461	not taken
Hay, bales.....	38,066	not taken

The Boston & Maine Railroad Company's new elevator has been made regular by the Chamber of Commerce.

G. W. Eddy of C. F. & G. W. Eddy, dealers in grain and hay, sailed for London April 19.

H. B. Goodwin of H. B. Goodwin & Co., dealers in flour and grain, sailed for Liverpool May 6.

Boston Chamber of Commerce memberships are selling for \$300 to \$315.

Fire in Boston & Maine hay shed No. 2 destroyed a quantity of hay consigned to Hosmer, Robinson & Co. Loss on shed and contents \$10,000; insured.

BUNKER HILL.

SHORTAGES AND ERRORS IN WEIGHING.

Editor American Elevator and Grain Trade:—"A Chicago weighman" notices in the March number of the AMERICAN ELEVATOR AND GRAIN TRADE that "Observer," in a previous number, "would account for some of the shortages by charging the weighmen at receiving elevators with dishonesty." He notices further that "Observer's" argument is "that to protect himself against his mistakes in weighing the weighman takes extra weight besides the regular toll to make sure of enough grain to fill receipts." He declares that "the argument is a poor one because there is never any trouble to fill receipts." Isn't this logic a little oval if not circular?

I have said that, in order to protect himself against mistakes and in order to be sure to have enough grain to pay the outstanding elevator receipts the weighman takes stronger weights than he would if he were quite certain that he made no mistakes. Now if "there is never any trouble about being able to fill receipts" at the Chicago elevator it is because there is plenty of grain on hand to do it with. And why is there plenty of grain? Because for some reason or another the weighmen have taken stronger weights than they should have taken. In order now to prove that my argument was "a poor one" the Chicago weighman will have to show how much of his surplus is the re-

sult of fear on the weighman's part of not having enough to pay receipts, and how much is to be charged to the weighman's prospective "pay that he gets out of it." At this point I wish to state emphatically that in all my years of experience with different weighmen employed at our elevators, I never had the slightest cause for suspecting that they personally profited to the amount of a single cent in the yearly surplus.

When the Chicago weighman asserts the "the only reason for stealing on the part of a weighman is what pay he gets out of it," and directly above this states "that there is never any trouble about paying receipts," I hope he has in mind some wicked weighman employed in rival elevators. Because if there is more than enough grain on hand to pay receipts (so much that "Observer's" argument seems ridiculous to him) the weighman must have the credit (?) for the amount, and if the surplus stands for the amount stolen, and "the only reason for stealing on the part of a weighman is what pay he gets out of it," the weighman's percentage must be very small, unless the Chicago weighman is much wealthier than any weighman I know personally.

Faet is I have concluded that our "Chicago weighman" is not half so bad as he would have people think he is. He's all right, it's only his logic that's off. Now to prove this let me go a little farther. He says: "Regarding the mistakes of a weighman I think it depends almost entirely on how he attends to business. If he is of a careless sort and has his mind much occupied with matters foreign to his work *there is no telling how many mistakes he would make.*" (The italics are mine.) "Such a man could not retain a position any length of time as a weighman in an elevator." That there is no telling how many mistakes a careless weighman makes, we all know. That is exactly what I have been claiming all along. In a large majority of cases there is no possible way of proving that the weighman has made a mistake or that he has not. The weighman himself does not know. Of course, my friend the Chicago weighman, means to say that if it appears that a weighman is of the careless sort, etc. But may not a weighman be absent-minded without appearing to be so? My friend admits that he has some mistakes to his credit (sic) the same as others, but how many or of what amounts he cannot say. Can anybody say, I wonder? Does the bookkeeper who has given him credit for his mistakes know how many or how much? If not, who does?

Now I know that every new weighman who went to work in our elevators was informed of the possibility of the elevator coming out short at the end of the year unless he was very careful to avoid mistakes. And, as I have stated before, I have best of reasons for believing that the weighmen are inclined to be well over on the safe side because they know they make mistakes. At this point the C. W. remarks that "if mistakes do occur they are as likely to be in favor of the elevator as against it, and therefore may not affect the balance." Which is partially true. But suppose a man weighs fifty ears in a day and takes strong weights on each ear to be sure to be on the safe side; if he makes one error of 1,000 pounds against the elevator, and one of 1,000 pounds in favor of the elevator, will not the result of his day's work "affect the balance?" Will not the strong weights on the other 48 ears count for something in the surplus?

In closing let me quote once more from the C. W. He says: "The complaints sent in by shippers of shortages have done a great deal of good. They should first be sure they are correct themselves, and if their ears fall short tick with a big K." Although he doesn't say exactly what he means, I understand very clearly exactly what he means to say, and I could produce pages of evidence which would prove beyond a doubt that in this he is entirely correct. No one is so much to blame for shortages as the shipper himself.

OBSERVER.

Grain dealers should support the only journal published in the interests of their trade. A year's subscription costs but one dollar.

If the crops of your district have any conditions, let us know what they are, that we may publish the fact in the AMERICAN ELEVATOR AND GRAIN TRADE.

MINNESOTA'S STATE ELEVATOR LAW.

People interested in the grain trade are loud in their protests against the system to be inaugurated by the state elevator law. Their claim that the state should not enter into competition with them in the grain trade any more than it should engage in other business enterprises, seems well founded, says the Minneapolis Tribune. They also complain of the tax of fifty cents per car for inspection, which it is believed the farmers will not willingly pay, though they seem to have been in favor of the general objects of the bill.

The fact of the matter is that the farmers have been disgusted with the low price of wheat and, like all other sufferers, have looked abroad to see if there was a balm in Gilead. The state elevator system was offered them as a solution of the difficulties, and many of them have approved of it because they knew of nothing better calculated to give them relief.

There seem to be many constitutional objections to the bill and the principle, it is generally acknowledged, is wrong. Farmers themselves will suffer more than any other class in the violation of this principle. They are many of them, perhaps a majority of them opposed to the principle of state control of their business. With the railroads and the telegraphs, they say, it is difficult; but they are nowhere on record as desiring to have the business of grain raising and marketing placed under the paternal care of the state.

That they hope to receive some benefits from this law is undoubtedly true, but that they will like to pay the additional tax and that they will like to have officers appointed by a governor, differing from them it may be in their political convictions, to take charge of their grain, is not so certain.

Besides, when the unconstitutionality of the measure is plainly shown, the money spent in the experiment will be deeply regretted. It is to the advantage of every business man in the state that the farmers should thrive. The demagogues who pretend to teach differently are friends to nobody—not even to themselves. Very often their pleas are made to conceal a real wrong with a fancied remedy, not in the interest of the farmer, but in the selfish interest of the demagogue who pretends to be the friend of the farmer.

Relief to the farmer lies not in the state elevator law. It is one of those roundabout measures which should always be replaced by a direct attack on the real evil. The law was passed in heat and during confusion and may be repented of in coolness and at leisure. If the grain men adhere to their resolution not to pay the additional inspection tax it does not seem that the law can compel them to do so, and thus the law, failing, may be a greater blessing than if it was put in force.

A FOREIGN GRAIN ELEVATOR.

A novel and very interesting machine is now in use at the Millwall docks, London, for the discharge of cargoes of grain in bulk, the principle applied being the removal of the grain by the creation of a strong current of air. The machine is erected on a barge which is placed alongside the ship to be operated upon. To the machine is attached one end of each of six 5-inch flexible pipes, the other end of each of which is carried into the hold or holds of the vessel and immersed a few inches in the grain. The engine is then started and the grain immediately flows at the rate of 100 tons an hour through the pipes into receivers, whence it falls by gravity into weighing machines, and then again by gravity into the craft sent by buyers to receive it. The machine in use has a power of 100 tons per hour, but the work done can be increased indefinitely by the addition of a corresponding engine power. The six pipes are worked together, but when necessary more or less of them can be shut off, and the rate of discharge is then reduced, but not in proportion to the number of pipes detached. With one pipe only in use, the power exercised carries 38 tons an hour through it.

It has been suggested that the subject of a collection bureau or clearing house be established by the hay and feed commission men and dealers of Chicago.

THE PETERSON PATENT ELEVATOR AND DUMP.

The accompanying sketch is designed to show the manner of constructing and operating the "Peterson Patent Elevator and Dump," an ingenious device used in connection with an elevator building for the purpose of receiving, storing and shipping grain of all kinds at large or small stations.

The manufacturers make many broad and sweeping claims in behalf of this invention which will appeal to the many thousands of buyers and shippers of grain.

First. The great scope in variety of grain handled, as shelled corn, both white and yellow; oats, white and black; wheat, rye and ear corn, both white and yellow, can be taken in, stored or shipped immediately with the absolute certainty that no mixing has taken place.

Second. The facility with which this may be done is interesting to note. A wagon load of seventy bushels of shelled corn can be received, stored or loaded into a car on the adjacent side track in less than four minutes, and the speed maintained throughout the day. Thus it will be seen the capacity of one machine will be from sixteen to twenty cars per day, an amount in excess of any stations' requirements. Third. The expense with which the above may be accomplished. With the aid of two men or one man and one boy this may be done and without additional expense of any kind.

Fourth. The advantage of the Low Down principle of handling grain over the ordinary high driveway and dump. No danger of frightening teams, entailing possible loss to life and limb. Humanity toward the brute creation, lightening their burden 75 per cent., and during rainy, icy or slippery times double or treble that amount. Fifth. The large storage capacity possible. Sixth. The low cost compared with any method extant. Cost reduced to a minimum and brought within the reach of all.

The device consists of a building, subject to many dimensions and forms of construction. A tower containing the frame work for the elevating device and the elevating apparatus itself. This latter consists of a receiving car, a winding drum governed by a suitable friction brake, and the necessary ropes to operate same as shown.

In operating the following program is followed: The door over pit is closed, the loaded wagon driven onto the dump sills, the pit door raised and contents of wagon dumped into the receiving box. The wagon is started forward a few feet and the operator attaches the drag rope to the reach or rear axle of the wagon, which is then driven out a distance of 120 feet, by which time the receiving box has been elevated onto the latches, and is ready to be dumped into the car chute or into the storage bins. This is accomplished by the operator with the aid of the friction brake without moving out of his tracks. The entire apparatus is practically automatic, easily and quickly operated.

When the driver has reached the required distance the team is stopped, he pulls the pin from the drag rope without getting out of the wagon and drives away for another load of grain. The operator after dumping the grain allows the receiving car to descend to pit, closes the door and is ready for the next load. The gravity of receiving car descending to pit automatically rewinds the drag rope onto the winding drum. In loading for shipment from the storage bins

the block at foot of guide posts are removed, allowing the receiving car to descend straight down to the pit. The center of said car being then directly under the bin chute. After filling, the car is then raised in same manner as previously described.

A platform scale may be located in the pit and the net weight of all grain received and shipped accurately recorded. This is an important feature and will be readily appreciated.

A power plant, either steam or gasoline, together with shelling, separating and cleaning machinery, may be used in connection with the device.

To handle ear corn, an auxiliary car is used and run on an overhead track to storage cribs, and the amount so stored is unlimited. The ear corn crib may extend at right angles with main building or parallel with main building to suit existing conditions.

The side track available is frequently a matter of concern and this device finds great favor with railroad companies, from the fact that but 40 to 50 feet is required, as the drive way does not obstruct nor prevent using the side track for other purposes.

The elevator shown in cut herewith represents one built for Mr. Samuel Troutman of Bearsdale, Macon

EUROPE AS A CORN MARKET.

It is said in behalf of Secretary Morton that he will "energize the corn propaganda in Europe," says the *Nebraska State Journal*. This is rather a peculiar way of putting a very agreeable piece of information in which the farmers of the country are particularly interested. If the new Secretary of Agriculture is able to compass the result, the farmers of this country are to find a market for their surplus corn in the old world. As is well known, our maize exports have always been inconsiderable as compared with our shipments of wheat. The people of Europe have not been made to understand that the Yankee johnnycake is a very edible production of the culinary art, and are equally ignorant of the many other wholesome and toothsome dishes of which our American corn is the chief concomitant. They may have a vague knowledge of its fermented virtues as materialized in bourbon whisky, but the masses of European citizens have no conception of the benefits that would accrue to them through the heavy importation of American corn as an article of food.

One of the chief recommendations of this product

is its cheapness as compared with wheat. There is scarcely a limit to the amount which could be raised in this country, and the crops would be limited only by the demand created by stimulating the markets of the old world. The extent to which it can be produced has been illustrated in the vast crops when corn was used as fuel in many sections of the country, and would have been a dead loss to the farmers had it not been a cheap substitute for coal and wood. Its warmth-producing qualities as an article of food are proverbial, and it would be an inestimable boon to the people of all classes in the colder countries of Europe. Already much valuable work has been done by Mr. Murphy, the Agricultural Department's special agent, along this line in Great Britain and



ELEVATOR OF SAMUEL TROUTMAN AT BEARSDALE, ILL.

county, Ill., in the fall of 1892. Mr. Troutman expresses great admiration for and satisfaction in the use of his elevator, and takes much pleasure in showing it to any and all visitors. During the icy period of the past winter Mr. Troutman received and shipped over 30,000 bushels of grain, at that time it being impossible to haul a load of grain up the driveway of the competing elevator. These elevators and dumps are in successful operation at La Place, Ill., Lintner, Ill., Doran Crossing, Ill., Coles, Ill., and other points although the invention has been on the market not yet one year.

Any further information and prices will be given by the manufacturers, Messrs. Oaks & Irwin of Decatur, Ill. These gentlemen are prepared to contract for the complete plant and deliver to the purchaser in a satisfactory working order.

When visiting the World's Fair do not fail to call at the office of the AMERICAN ELEVATOR AND GRAIN TRADE, Room 5, 184 Dearborn street, and get a Souvenir Guide to the World's Fair and Chicago.

The Minnesota state grain inspection department has decided to adopt the St. Paul Clay Car Seal Company's seal as the official seal of the department. The initial order was for 50,000 seals. The Terminal Elevator Company at Minneapolis is also adopting the same seal, and has ordered nearly 200,000 of them for immediate use. A good seal is most valuable when it is used after as well as before inspection.

Germany, but our export corn trade is still in its infancy and needs an infinite amount of intelligent pushing. It is to be hoped that Secretary Morton will succeed in his efforts to create a foreign market for this staple, and that before the present administration goes out we will see this widely used article of food in demand among all the leading countries of the old world.

STATE ELEVATORS AT BUFFALO.

The committee of canal boat owners at Buffalo appealed to the New York Legislature for aid to build two floating elevators for transferring grain at Buffalo. They say the pool gets for transferring 100,000 bushels of grain (including use of steam shovel) \$1.075; state elevator rate, steam shovel free, \$250; reduction on 100,000 bushels, \$825. Men in Buffalo who are well qualified to know say that the state elevators can each be made to elevate 200,000 bushels per day. At that rate they could return their costs to the state every 120 days after they are put in operation. After reading the above statement one would naturally say, why don't individuals build some elevators? So they have, but are invariably drawn into the pool, or are removed by the harbor master into impossible places. Hence the necessity of the state owning and operating a few elevators to save the great Erie Canal and Hudson River water route from being rendered worthless as far as the grain trade is concerned.

HAY GRADES AT CLEVELAND, O.

Choice Timothy—Shall be timothy and not more than a slight mixture of other tame grasses, good color, well cured and free from must.

No. 1 Timothy—Shall be timothy and not more than one-fifth of other tame grasses mixed, good color, well cured and free from must.

No. 2 Timothy—Shall be timothy and not more than one-third of other tame grasses, mixed, good color, well cured and free from must.

Mixed Hay—Shall consist of tame grasses mixed, good color, well cured and free from must.

Prime Prairie—Shall be purely upland hay, free

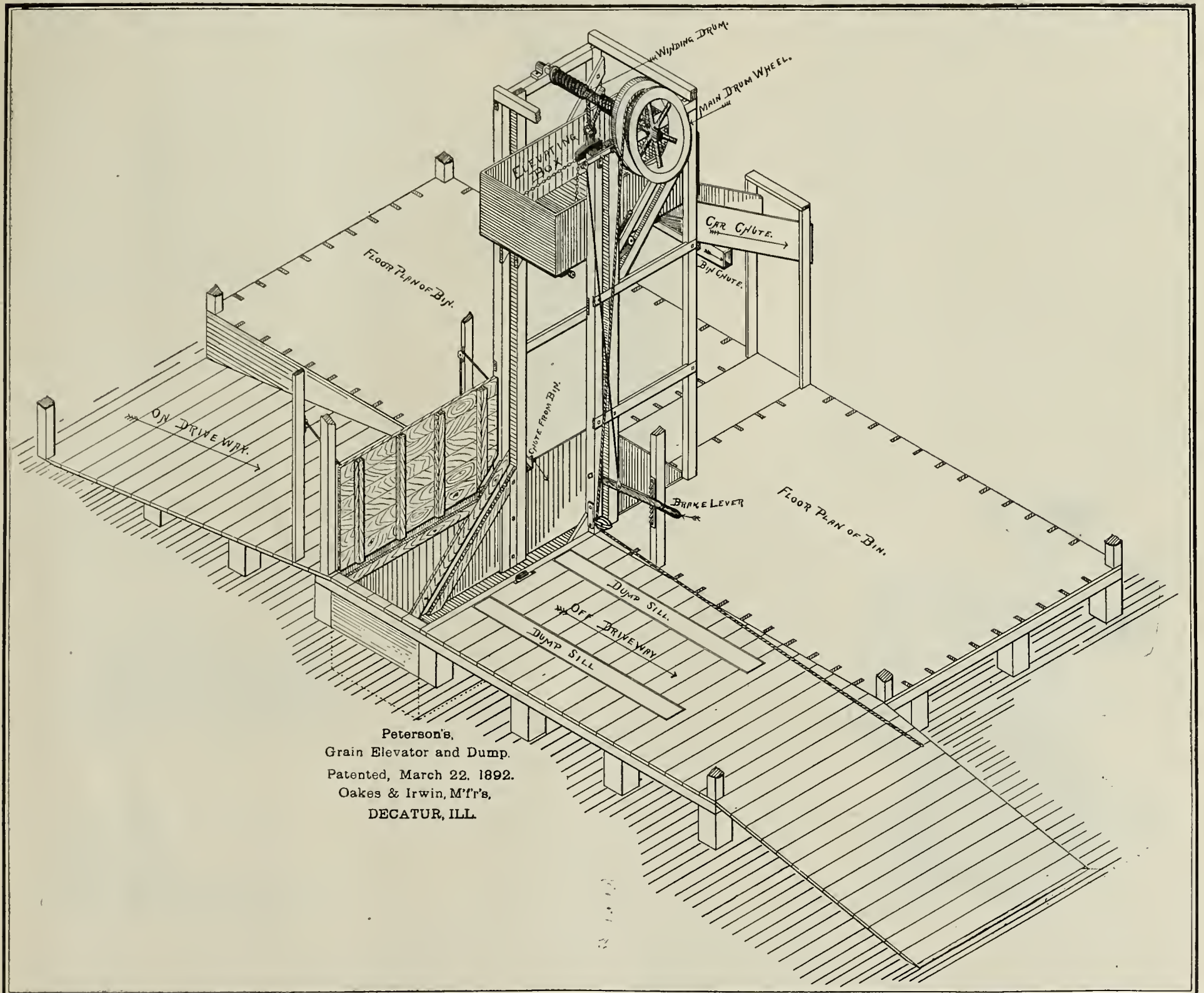
found at the doors it shall be the duty of the inspector to reinspect the car by unloading or such measure as will enable him to examine each and every bale and to issue a certificate giving the number of bales and grade of same found. For this service the reinspection fee shall be \$3 per car, to be paid by the seller in case a lower grade is found than that first reported found at the doors. To be paid by the buyer in case no lower grade is found than that first reported.

BALING AND HANDING HAY.

Pass over the work of setting the press, which differs in the case of the various machines on the market. If

initiated not to press wet or very damp hay, nor to commence pressing immediately after a heavy rain or during a wet time, especially if the hay is in stack, as in the former case the hay is sure to heat and mould, and even if apparently dry when baled it may not keep well.

Almost every one can become a good feeder by practice, but a few hints to the beginner are not amiss. The most important point to be learned is to make an even bale, so the strain on each wire will be equal, for if more hay is at the top or the bottom the bale will become crooked after it leaves the press. Some prefer to use a dish tined and others a straight tined fork, but an ordinary three tined fork is recommended,



Peterson's,
Grain Elevator and Dump.
Patented, March 22, 1892.
Oakes & Irwin, M'frs,
DECATUR, ILL.

PETERSON'S PATENT GRAIN ELEVATOR AND DUMP.

from swale grasses, good color, well cured and free from must.

No. 1 Prairie—Shall be upland and midland prairie hay, good color, well cured and free from must.

No. 2 Prairie—Shall be swale or slough hay, either wholly or mixed with upland, good color, well cured and free from must.

No Grade Hay—Shall be all kinds of hay, badly cured, stained or in any way out of condition, the certificate of inspection stating whether it is tame or prairie hay.

Hay—It shall be the duty of the inspector to inspect all hay on arrival and determine grade of each car by the quality of hay that can be seen at the car door. For such inspection the fees shall be the same as on grain.

Reinspection—In case buyer claims to have found a lower grade in car than that reported by inspector

the stack has only been built a short time and has kept good, it is not necessary to use the knife, as an iron tooth rake will remove the bleached hay on the outside; but if the stack has stood long or taken water it can only be trimmed properly with a knife. The top should be thrown off until good hay is reached, and the outside of the stack which is bleached and dried until there is no substance in it, can then be readily trimmed off, the loss of such trimming being less than is naturally supposed, as the hay on the outside is bleached and dried until it is very light, and would add but little to the weight of the baled hay; while to put it in the bales would injure their appearance very materially. When the beater press was in use, making large bales of 300 to 500 pounds, it was possible to put in poor hay and not have it show, but with the small bales, made by presses now in use, it is almost impossible. A warning is given to the un-

with the tines cut to eight inches, so they will not strike the bottom of the press before the hay is pushed down to the proper position in the feed hole.

The number of ties to the bale must be determined by the operator, according to the size and weight of the bale. A larger bale than a 16x18 requires three ties. If only two are used the distance between them would be too great and the bale would expand out of shape. For moderately tight pressing on a 16x18 press, two No. 14 wires are sufficient, but for heavy work, even on that size, three are preferable. Shippers should bear in mind that when a bale bursts in transportation it is almost or quite a total loss.

If you build, buy or move an elevator kindly send us that information for publication. It will cost you nothing and will serve to remind your brother dealers that you are on earth.

Queries and Replies.

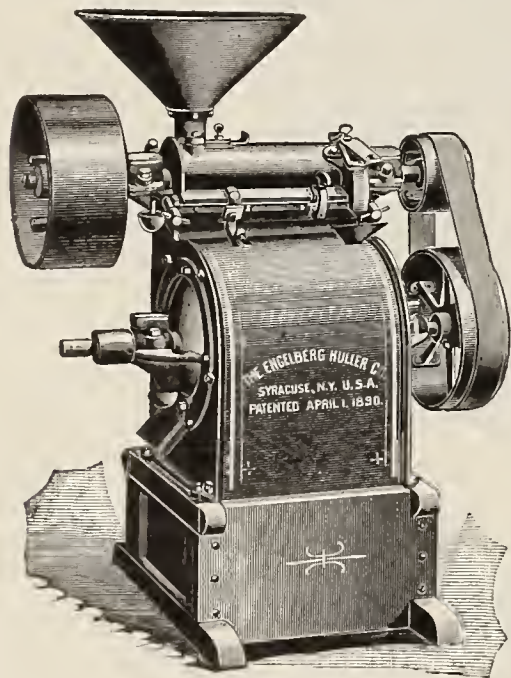
Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.

No. 16. Want to Buy Seed.—As we wish to buy extensively direct from country dealers, so as to get the seed from first hands without going to the Board of Trade market, we desire the following information: Where is timothy seed, orchard grass, blue grass, red top, Hungarian and millet, the latter both common and German, raised most extensively? What are the best markets to buy this direct from country points? —JOHNSON & SOX, Goshen, Ind.

THE ENGELBERG RICE HULLER.

The Engelberg Rice Huller will take any description of rice, in any condition and not only hull it but will clean the rice, separate the hulls from the grain, and polish the rice, giving it a fine finish. This huller is made of steel and iron, has no cog wheels, no plates, no rubber or steel springs, nor anything to get out of order, and it can be taken apart into small pieces to carry on a mule's back. The case is fixed and only the cylinder revolves, and the machine, in fact, is the perfection of simplicity. The reason it will clean any kind of rice is because of the hulling blade, which can be adjusted to give the proper amount of friction on the grain, so that it will be rubbed all that is necessary, yet without breaking any rice.

The principle on which this huller does its work is this: The rice when in the hopper is run inside the huller and pushed forward by means of spiral ribs on the cylinder right at the entrance; then, while the rice is traveling to the discharge end of the machine it is brought up over and over again, by means of the ribs on the cylinder, against the hulling blade, which



THE ENGELBERG RICE HULLER.

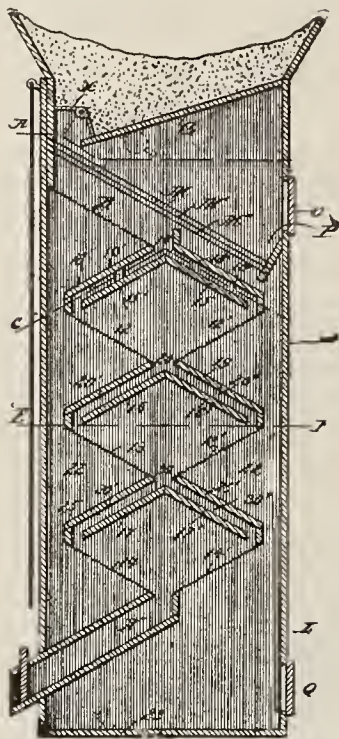
is set so as to allow the rice to pass between it and the ribs without breaking it. Every grain of rice has to go many thousands of times against the hulling blade before it is discharged, and not a grain will get through without being not only hulled, but perfectly cleaned. By shutting the discharge opening a little and retaining the rice longer in the huller one can regulate the amount of finish required. The machine will take the rice in proportion to the quantity discharged, needing no feeding arrangement of any kind. This huller will grind the hulls all fine so that they, with the rice flour, make excellent feed for stock. It requires about 8-horse power, and when properly adjusted reduces the breakage to a minimum yet unobtainable by any other means, while the yield is much greater.

The catalogue issued by the company gives much information regarding this huller, which has been greatly improved of late. Many of these machines are being put in the larger mills in the South in place of the old mortar and pestle, and a great saving is thereby being effected in the breakage of the rice. The company is now making a large polisher to sell with the

huller for use in large mills. For planters, however, the huller and polisher combined is all that is required as it is complete and ready for work at any time. It is simple to operate and any person can easily operate it by following the directions in the catalogue. Full information can be obtained by writing the Engelberg Huller Company, Syracuse, N. Y.

SELF-ACTING GRAIN CLEANER.

Nathan B. Higbie of Chicago has been granted a patent on a grain cleaner or oat sifting machine. As



SELF-ACTING GRAIN CLEANER.

shown in the cut given herewith, the device consists of a series of inclined screens *R*, 12, 12', 13, 13', 14, 14', arranged in pairs one above the other with the supply hopper on top, waste openings *O* and *Q* inside and grain chute *N* at bottom. Below the feed gate *X'* are the screen wires *M*, *M'*, inclined downward to the pocket *P*. The whole is contained in the casing *L*.

The grain to be cleaned is filled into the hopper, the gate *X'* is opened by pulling down the rod at the left and the grain is dropped between the wires, which carry off to the opening *O* any straws, down on the first screen *R*, over which it passes into the pocket 10. Dividing, the grain flows in two streams from the pocket over the plates 15 and 15' to the pair of screens 12, 12', over which it runs to the pocket 20. This process is twice repeated before the grain reaches the chute *N*. The waste that passes through the screens is thrown aside by the plates 18, 18', etc., and, when sufficient has collected in the bottom of the case, it is discharged through the opening *Q*.

GRAIN BAG OPTIONS.

The San Francisco *People's Press* says: In answer to a subscriber we will state that grain bags, when quoted June-July delivery, means that any responsible farmer can contract with his agent or any dealer in this city for the bags to be delivered in either of those two months. When the contract reads, "the buyer has the option to call for the bags in either June or July," then the seller must deliver the bags when wanted, but if the contract reads, "the seller has the option of delivery," then the buyer must take the bags at any time the seller wishes to deliver in either of those two months. If no option is mentioned and only June-July delivery is given, then the seller can deliver or the buyer call for them either on June 1 or July 1. A responsible farmer can contract without an indorsement, but when not known an indorser or a payment is necessary. When the bags are taken a negotiable note must be given or cash must be paid.

Broom corn valued at \$22,515 was exported during the month of March, against \$5,905 during the preceding March; and during the nine months ending with March the exports were valued at \$121,144, against \$199,147 during the corresponding period of 1891-2.

ERIE CANAL IMPROVEMENT.

At a meeting of the Buffalo Merchants' Exchange recently the following preamble and resolutions, urging a survey of the Erie Canal in the interest of deeper water, were unanimously adopted:

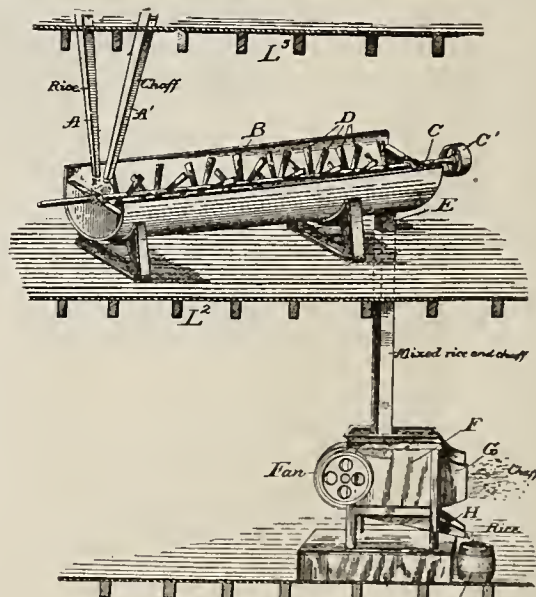
WHEREAS, In accordance with the resolution adopted by the canal convention in Buffalo on October 19, 1892, Mr. Martin Shenck, the state engineer and surveyor, recommended in his last annual report "that sufficient funds be placed at the disposal of the state engineer to allow him to make a survey of the Erie Canal, from which to make plans for increasing the depth of water therein to nine feet at all points except where it passes over culverts, over aqueducts and through locks, wherein a minimum depth of eight feet of water should be obtained, and to report such plans to the next legislature with his estimate of the cost of carrying the same into effect," therefore be it

Resolved, That the legislature of the state of New York during its present session be earnestly requested to carry out the suggestion of Mr. Martin Shenck as outlined in the preceding preamble, and

Resolved, That a copy of the foregoing resolutions be forwarded to the senator and the members of assembly from Erie county with the request that they take immediate action in the matter; also to the New York Produce Exchange, the Union for the Improvement of Canals and the Board of Trade and Transportation, urging these bodies to co-operate with this Exchange in endeavoring to procure the desired legislation.

METHOD OF POLISHING RICE.

A method of polishing rice by rubbing the hulled grains of rice against the rice hulls or chaff has been invented by Joseph Menge of New Orleans, La. In applying his method he uses the apparatus shown in the illustration given herewith, consisting of a combined rubber and conveyor on one floor of the mill, and a separator on the next floor. The conveyor trough is made large, cylindrical in shape, and is



METHOD OF POLISHING RICE.

firmly mounted. The beaters *D*, radiating from the shaft *C*, are so shaped as to not only thoroughly stir the mixture of rice and hulls but also to gradually move the mass to the down spout *E*.

From bins on the third floor the rice and chaff descend through the spouts *A* and *A'* into one end of the mixer, rubber and conveyor. Thence the mixed rice and chaff pass down the perpendicular spout into the fan *F* on the first floor, where the chaff is blown out and the polished rice is run into the barrel *K*.

"The grain trade should be elevated," wrote the moralist. "O, elevate the grain and let the trade look out for itself," retorted the speculator.

If you are of the opinion that some of the many evils of the grain trade need reforming let your brother dealers know it. Free discussion would induce others to see by the same light, and this might be followed by united action for reform. If you have opinions on any subject of interest to grain dealers express them. Our columns are free and we are always pleased to receive such matter for publication.

VISIBLE SUPPLY OF GRAIN.

The following table shows the visible supply of grain Saturday, May 13, 1893, as compiled by George F. Stone, secretary of the Chicago Board of Trade:

In Store at	Wheat, bu.	Corn, bu.	Oats, bu.	Rye, bu.	Barley, bu.
Albany	758,000	489,000	138,000	39,000	20,000
Baltimore	204,000	110,000	66,000	1,000	80,000
Boston	3,667,000	1,912,000	598,000	173,000	11,000
Chicago	19,833,000	1,912,000	598,000	173,000	11,000
do afloat	7,000	4,000	1,000	11,000	11,000
Cincinnati	1,428,000	8,000	44,000	1,000	65,000
Detroit	15,214,000	341,000	17,000	5,000	5,000
Duluth	116,000	44,000	85,000	1,000	4,000
Indianapolis	121,000	259,000	26,000	1,000	53,000
Kansas City	948,000	10,000	44,000	61,000	53,000
Milwaukee	1,357,000	1,000	17,000	40,000	38,000
do afloat	10,707,000	14,000	569,000	27,000	84,000
Minneapolis	579,000	442,000	438,000	21,000	20,000
Montreal	5,416,000	122,000	103,000	12,000	14,000
New York	123,000	166,000	133,000	7,000	2,000
Oswego	930,000	456,000	105,000	109,000	33,000
Peoria	3,987,000	192,000	109,000	33,000	74,000
Philadelphia	122,000	1,000	50,000	1,000	10,000
St. Louis	2,806,000	1,898,000	817,000	174,000	10,000
do afloat	234,000	89,000	45,000	1,000	1,000
On Canals	1,298,000	1,898,000	817,000	174,000	10,000
On Lakes	2,026,000	1,898,000	817,000	174,000	10,000
On Miss. River	13,000	89,000	45,000	1,000	1,000
Grand total	72,682,000	7,829,000	3,527,000	608,000	552,000
Same date last year	35,111,000	4,318,000	4,301,000	870,000	440,000

INSPECTED RECEIPTS AT CHICAGO.

According to the report of Chief Grain Inspector George P. Bunker the grain received at Chicago during the month of April was graded as follows:

WINTER WHEAT.

Railroad.	White.			Hard.			Red.			No Grade.
	2	3	4	1	2	3	1	2	3	4
C. B. & Q.	1	3	3	2	19	18	39	19	8	8
C. R. I. & P.	1	1	1	8	20	27	43	16	16	16
C. & A.	1	1	1	3	5	22	4	4	4	4
Illinois Central	1	1	1	2	4	85	9	1	1	1
Freeport Div.	1	1	1	9	1	1	1	1	1	1
Galena Div. N. W.	1	1	1	1	2	4	14	1	1	1
Wis. Div. N. W.	1	1	1	1	1	13	36	21	6	6
Wabash	1	1	1	1	1	8	85	4	3	3
C. & E. I.	1	1	1	1	1	13	36	1	1	1
C. M. & St. P.	1	1	1	1	1	13	36	1	1	1
Wis. Cent.	1	1	1	1	1	13	36	1	1	1
C. Gr. Western	1	1	1	1	1	13	36	1	1	1
A. T. & S. Fe.	1	1	1	1	1	13	36	1	1	1
Through & Spec.	1	1	1	1	1	13	36	1	1	1
Total each grade	2	14	11	2	99	299	537	658	97	33
Total W. wheat	2	14	11	2	99	299	537	658	97	33

SPRING WHEAT.

Railroads.	Northern.	2	3	4	No Grade.	White.	Mixed Wheat.
		2	3	4		2	3
C. B. & Q.	2,070	683	21	1	1	23	4
C. R. I. & P.	4	18	4	1	1	3	3
C. & A.	1	5	22	4	4	4	4
Illinois Central	1	2	4	85	9	1	1
Freeport Div.	1	9	1	1	1	1	1
Galena Div. N. W.	1	1	2	4	14	1	1
Wis. Div. N. W.	1	1	1	1	1	1	1
Wabash	1	1	1	1	1	1	1
C. & E. I.	1	1	1	1	1	1	1
C. M. & St. P.	1	1	1	1	1	1	1
Wis. Cent.	1	1	1	1	1	1	1
C. Gr. Western	1	1	1	1	1	1	1
A. T. & S. Fe.	1	1	1	1	1	1	1
Through & Spec.	1	1	1	1	1	1	1
Total each grade	3,979	2,297	238	6	1	121	4
Total sp. wheat	3,979	2,297	238	6	1	121	4

CORN.

Railroad.	Yellow.		White.		2	3	4	No Grade.
	2	3	2	3				
C. B. & Q.	88	79	13	10	569	420	19	19
C. R. I. & P.	26	31	2	5	28	78	7	7
C. & A.	35	34	12	29	28	26	29	7
Illinois Cent.	43	384	13	75	12	176	167	54
Freeport Div.	1	4	1	3	2	11	11	11
Gal. Div. N. W.	30	27	1	4	26	29	9	9
Wis. Div. N. W.	1	1	1	1	1	1	1	1
Wabash	4	37	4	6	3	66	43	4
C. & E. I.	7	29	4	3	5	49	28	1
C. M. & St. P.	7	7	1	15	29	5	1	1
Wis. Cent.	3	26	1	8	19	7	1	1
C. Gr. Western	23	17	17	5	66	36	11	11
A. T. & S. Fe.	26	86	1	1	4	36	16	3
Through & Spec.	26	86	1	1	4	36	16	3
Total each grade	293	761	68	140	757	1,049	362	71
Total corn	293	761	68	140	757	1,049	362	71

OATS.

Railroad.	White.			Clipped.		No Grade.
	1	2	3	1	2	
C. B. & Q.	112	393	66	65	2	2
C. R. I. & P.	7	433	16	121	1	1
C. & A.	16	60	89	29	1	1
Illinois Central	6	266	297	57	1	1
Freeport Div.	2	84	8	46	1	1
Galena Div. N. W.	18	452	20	111	2	2
Wis. Div. N. W.	1	31	26	3	3	3
Wabash	4	237	24	46	1	1
C. & E. I.	1	29	24	13	1	1
C. M. & St. P.	4	358	14	128	3	3
Wisconsin Central	1	1	1	1	1	1
C. G. Western	4	108	9	51	1	1
A. T. & S. Fe.	22	141	107	44	1	1
Through & Special	5	61	180	55	4	4
Total each grade	201	2,654	854	792	1	18
Total oats	201	2,654	854	792	1	18

RYE.

Railroad.	1	2	3	No Grade.
C. B. & Q.	2	10	14	14
C. R. I. & P.	1	14	14	14
C. & A.	1	14	14	14
Illinois Central	1	14	14	14
Freeport Div.	1	14	14	14
Galena Div. N. W.	1	14	14	14
Wisconsin Div. N. W.	1	14	14	14
Wabash	1	14	14	14
C. & E. I.	1	14	14	14
C. M. & St. P.	1	14	14	14
Wisconsin Central	1	14	14	14
C. G. Western	1	14	14	14
A. T. & S. Fe.	1	14	14	14
Through & Special	1	14	14	14
Total each grade	18	60	78	78
Total rye	18	60	78	78

BARLEY.

Railroad.	Bay Brewing.		Chevalier.		No Grade.		Total No. Cars by Each Road.
	3	3	2	3	4	5	
C. B. & Q.	4	24	11	1	1	1	4,800
C. R. I. & P.	1	2	37	1	1	1	957
C. & A.	1	1	1	1	1	1	441
Illinois Central	1	1	1	1	1	1	1,652
Freeport Div.	1	1	1	1	1	1	216
Galena Div. N. W.	1	1	1	1	1	1	1,146
Wis. Div. N. W.	1	1	1	1	1	1	672
Wabash	1	1	1	1	1	1	560
C. & E. I.	1	1	1	1	1	1	308
C. M. & St. P.	1	1	1	1	1	1	2,449
Wisconsin Central	1	1	1	1	1	1	19
C. G. Western	1	1	1	1	1	1	924
A. T. & S. Fe.	1	1	1	1	1	1	796
Through & Spec.	1	1	1	1	1	1	2,762
Total each grade	1	4	469	280	17	9	17,302
Total barley	1	4	469	280	17	9	17,302
Total all grain	1	4	469	280	17	9	17,302

FLAXSEED AT CHICAGO.

The monthly receipts and shipments of flaxseed at Chicago during the past sixteen months, as reported by S. H. Stevens, flaxseed inspector of the Board of Trade, were as follows:

Months.	Receipts.		Shipments.	
	1893.	1892.	1893.	1892.
January	396,550	782,650	323,261	296,355
February	187,550	556,050	233,556	200,884
March	367,950	592,900	333,257	223,395
April	232,650	547,800	660,506	702,589
May	309,650	743,930	743,930	743,930
June	563,750	577,002	577,002	577,002
July	612,700	806,375	806,375	806,375
August	729,300	1,009,113	1,009,113	1,009,113
September	761,750	974,668	974,668	974,668
October	1,452,000	1,150,685	1,150,685	1,150,685
November	1,395,350	1,365,880	1,365,880	1,365,880
December	743,050	228,060	228,060	228,060
Total	1,184,700	9,046,950	1,549,579	8,278,936

RECEIPTS AND SHIPMENTS AT CHICAGO.

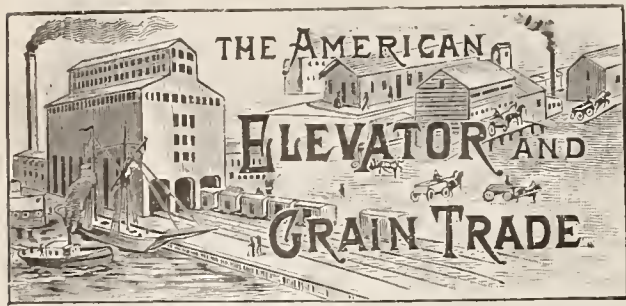
The following table, compiled by George F. Stone, secretary of the Board of Trade, shows the receipts and shipments at Chicago during April, 1893 and 1892, of seeds, hay and broom corn:

Repts.	Timothy lbs.	Clover lbs.	Other grass seeds, lbs.	Flax-seed, bu.	Broom corn, lbs.	Hay, tons.
1893	1,689,237	626,542	644,510	238,594	1,287,370	19,067
1892	3,898,460	794,246	1,168,467	617,049	161,200	12,440
Ships.	5,018,191	871,860	706,948	711,585	1,621,541	4,379
1892	4,706,388	512,851	1,254,387	740,227	937,273	2,151

RANGE OF PRICES AT CHICAGO.

The daily range of prices of grain for April delivery at Chicago since April 15 and for May delivery since May 1 has been as follows:

April.	WHEAT.			CORN.			OATS.			RYE.		BARLEY.		FLAX SEED.	
	Low.	High.	Closing.	Low.	High.	Closing.	Low.	High.	Closing.	Low.	High.	Low.	High.	Low.	High.
15 16	76	77	76½	40½	40½	40½	28½	28½	28½	52	52	42	65	115½	115½
17	74	77	75½	40½	40½	40½	28	28½	28½	51½	51½	40	63	115	115½
18	73½	74½	74½	40½	40½	40½	28	28½	28½	51½	51½	46	66	112½	113½
19	72½	73½	72½	39½	40½	40	27½	28½	27½	51	51½	44	60	113	114
20	70½	72½	72½	40	40½	40½	27½	27½	27½	51½	51½	45	56	113½	114
21	71½	72½	72½	40½	40½	40½	27½	28½	27½	51	51½	40	58	114½	115
22	71½	72½	72	40½	40½	40½	27½	28½	28½	51½	51½	40	65	114½	114½
23															
24	72½	73	72½	41½	42	41½	28	28½	28½	51½	52	42	60	111	114½
25	72½	72½	72½	41½	41½	41½	28½	28½	28½	51½	51½	46	50	113	114
26	71	71½	71½	40½	41½	40½	28½	29½	28½	50	50½	45	63	112½	113
27	70	71	71½	40½	41½	41½	28½	28½	28½	50	50	42	55	112	112½
28	70½	71½	71½	41½	41½	41½	28½	29½	29½	50½	50½	40	63	111	111½
29	70½	71½	71½	41½	41½	41½	28½	29½	29½	50	50½	45	62	111	111½
30															
1															
2	71	72	71½	41½	42	41½	28½	29½	29½	50½	51	44	63	111	111½
3	71½	72½	71½	41½	43	42½	29½	30½	30	52½	53	44	63	110½	110½
4	71½	72½	72	42½	43½	43	30½	31½	31	53	53	13	56	110	110
5	72½	72½	72½	43½	44½	44½	30½	32½	32½	54½	54½	44	64	108½	109
6	72½	74½	74½	44	47½	44½	31½	32½	32	55½	56	40	63	109	109
7															
8	74½	76	74½	43½	44½	43½	31½	31½	31½	57	57	40	66	108½	109½
9	75	76	76	42½	43½	42½	30½	31	31	57½	57½	42	66	108½	108½
10	75½	76½	75½	42½	42½	42½	30½	30½	30½	58	58	13	56	108½	108½
11	73	74½	75½	42½	43½	43½	30½	30½	30½	59	59	43	66	107½	108
12	73½	74½	74½	42½	43	42½	30½	30½	30½	59	59½	40	66	107	108
13	73½	74½	73½	42½	43	42½	30½	30½	30½	59½	60	40	66	106½	106½
14															



PUBLISHED ON THE FIFTEENTH OF EACH MONTH BY

MITCHELL BROS. COMPANY.
 (INCORPORATED.)

OFFICE:

 Howland Block, 184 and 186 Dearborn St.,
 CHICAGO, ILL.

 Subscription Price, - - - \$1.00 per Year.
 English and Foreign Subscription, - - 1.50 " "

English and Foreign Subscriptions may be sent to W. H. Smith & Son, 186 Strand, London, W. C., Eng.

 A. J. MITCHELL, - - - Business Manager.
 HARLEY B. MITCHELL, - - - Editor.

ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., MAY 15, 1893.

SOLICITING FARMERS' SHIPMENTS.

A grain commission man who was recently upbraided for soliciting shipments from farmers responded with the very plausible argument that he was in no way to blame for doing so, and that he had been forced into it by the country dealers, who sold direct to private elevator men at terminals for terminal prices, less freight. The country shipper saves a commission by this transaction and the commission men at that market lose one.

This action on the part of the country shippers is not to be condemned. It is their right to sell as they please and where they please; but in the long run they may deprive themselves of much needed friends in terminal markets. As commission men become less numerous and, therefore, less powerful in terminal markets, elevator men will become more independent and arbitrary. It is the commission men, the paid agents of country shippers, who secure concessions and work for the interests of country shippers in every market. It is directly to their interests to encourage shipments in every way possible, for their business depends upon consignments. However, their commission should not be so much a bushel, but should be a certain per cent on the gross amount of the sale. It would serve as an impetus to secure the highest market prices. The commission man cannot be condemned because he solicits shipments direct from farmers, although he thereby becomes a competitor of the country buyer in his own market. The commission man must have consignments or retire. It matters not to him (nor should it) who makes the consignments. He is not likely, however, to solicit consignments from farmers in a market occupied by one of his patrons. If

he does, he forfeits all rights to that shipper's business. Country shippers have the power in their own hands to continue the old way or to drive commission men to soliciting shipments direct from farmers.

A DEPARTURE—GRAIN WANTED.

We have announced in a milling journal that any miller who wants grain can have his wants made known to the readers of the AMERICAN ELEVATOR AND GRAIN TRADE free of charge, by informing us the quality and quantity of grain wanted. We will perform a like service free of charge for any one wanting to buy grain, hay, straw or seeds. Readers we trust will find this a profitable feature of the journal, which is published in their interests.

For the present the wants of prospective buyers will be published in our "Communicated" department. Later we hope to receive enough to start a department devoted to buyer's wants. If dealers do not reply to the communications published that is their loss.

RELATION OF RAILWAYS TO THE PUBLIC.

Where a railway is organized, it requires some concessions from the public, which place it under obligations not common to ordinary business. For this reason the courts and the government have a much larger jurisdiction over such corporations than is exercised over those of a more private character. A more general understanding of the peculiar relationship which exists between the railways and the public would doubtless result in a material reduction of the friction which occurs.

The foundation of all this question is the right of eminent domain. It is necessary for the good of a nation that some means be provided for the ready interchange of merchandise and the convenient travel of the people, and so, from the earliest times, special rights and immunities were granted to those who in that service should offer themselves as common carriers. In return for these concessions the carrier was placed under responsibility of carrying for all who come, at a fair compensation. When the railroad came to revolutionize the business of common carriage a new question arose—the right of way. Then came the operation of the law of eminent domain. Under that law, in order to prevent the rapacity of private greed from encroaching upon the progress of the public, the state steps in, and for what may be judiciously determined to be a fair compensation, takes away from the citizen the use of so much of his private property as may be necessary for the proper conduct of a railway, and turns it over to the private corporation for use in the service of the public.

Some precedent conditions must exist, however, before this right can be exercised. The corporation must be a common carrier, and the property taken must be necessary for its use. Having taken it, the use for that purpose is all that the corporation gets, and either misuse or nonuse will forfeit the grant. Misuse is where, in addition to operating a railway, the company rents out for private purposes the property taken for public use, as where elevator or private warehouse sites are rented on lands condemned for right of way. It has been held in such cases that the rentals belong to the owner of the land from which the right of way was taken.

The right of public regulation of carriers rests upon another ground as well. From time immemorial, a common carrier has been held subject to governmental regulation, because his position placed him where he could, if unrestrained, practice extortion upon his customers. But the only regulations upon this ground which were ever enforced were that the carrier must

carry for all who apply, and that his rates must be reasonable for the service performed.

In modern days the courts and legislatures bring these principles together, and hold that because a common carrier voluntarily enters the service of the public as such, he thereby places himself subject to the regulations that he must carry for all who apply at reasonable rates, and that because he avails himself of the right of eminent domain, and seeks from the state the very property upon which his business depends, the state has a right to direct his use of that property so that it shall conserve the best interests of all.

That, in substance, is the theory upon which modern railway regulation proceeds. The railway is a public servant. It becomes so by its own corporate volition. As such it is as much amenable to public regulation as the mail carrier or the soldier. There is this vital difference which some legislatures seem to overlook. If the mail carrier or the soldier meets a reduction of his income, which renders it impossible for him to live, he can retire from the public service and seek other means of livelihood. If the state cuts the revenue of the railway below a living point, retirement is impossible, and corporate death, with its attendant private disasters, is the only relief.

INTRODUCING ELEVATOR IMPROVEMENTS.

In this number "Observer" has an excellent article on the introduction of improved appliances in grain elevators. He shows how thoroughly the consumers and inventors of improvements are dependent upon the contractor. He pictures a very desperate state of affairs in which the interests of the elevator man are sacrificed for a trifle.

We are sorry to say that his statements are correct, but we cannot blame the contractors as he does. The elevator men, the inventors and manufacturers of improved devices and machines for handling grain have themselves to blame. If the elevator man is posted regarding the improved construction of elevators as he ought to be, he will demand when letting a contract that these improvements be incorporated in his house. However, elevator men do not suffer much here as the fierce competition among builders and architects prompts them to strive to make each house a credit to their skill.

With elevator supplies it is different. The elevator man should read the journal devoted to his business, keep posted on improved devices placed on the market, and watch the improvements that are adopted by other elevator men. He should know what is latest and best and then ask for what he wants and needs when contracting for his machines and machinery. If he does not ask for certain machines and improvements he cannot blame the contractor for not putting them in. Contractors like other mortals work for their own interests. They would be looked upon as a set of blooming clumps by the entire trade if they did not do so. They cannot be blamed for pushing the machine that brings them the greatest returns in the form of a commission. It is a legitimate business transaction and no one can be expected to do otherwise. The scale men are offenders in this line and will continue to be such until inventors and makers of improved scale attachments let the elevator men know of the existence of such improvements.

Improvements cannot be expected to meet with a demand until the consumers know of them and their utility. Attempting to advertise them through contractors and dealers in supplies whose interests in sales are limited by the commission is a mere farce, and, like everything else that is left to disinterested parties, it is not done well or satisfactorily. If owners of patented elevator devices want to do business they cannot depend upon middlemen to push their machines

or devices. They must advertise the devices or machines and the names of houses supplying them, and thereby keep elevator men posted as to their advantages and where they may be purchased. By creating a demand among consumers for any article the owner or manufacturer can compel dealers to handle it, and can dictate the terms on which he will permit them to handle it. This is far more advantageous than the erroneous plan of placing a machine or device at the mercy of jobbers. The fate of many an excellent machine has been the opposite of what it would have been had consumers been advised of its good qualities. "Observer" points out no remedy for the evil, but gives up in despair. As we have clearly pointed out, the remedy is in the hands of the owner. Let consumers know what is the best and they will buy it.

SLANDERING COUNTRY DEALERS.

A grain dealer at Le Sueur, Minn., wants \$15,000 damages from citizens who wrongfully circulated reports to the effect that his grades and weighing were not correct, and thereby greatly diminished the amount of his business. If he can prove that the charges were made by certain persons, and that the charges were false, he has a clear case.

Narrowminded, nearsighted merchants at many of our country towns have injured the trade of the town and themselves greatly by injudiciously repeating charges made to him by some one working in the interest of a neighboring market, by some tricky farmer that found the buyer too shrewd for him, or by a disgruntled farmer that is happy only when kicking.

If merchants, instead of circulating these charges, which are oftener false than true, would take the falsifier right to the grain dealer and ask for an explanation or remedy, he would undoubtedly get both. In most cases the farmer would not have the face to repeat the charge. If he had good grounds for complaint the dealer, who may not have known of it, would surely give him satisfaction, and assure him that it would not occur again. It would be to his interest to do so, and the town would profit by retaining much trade that would have been driven away had the reports, false or otherwise, been circulated.

WEIGHING GRAIN AT CHICAGO.

Readers will find in this number an interesting account of the work of the Weighing Department of the Chicago Board of Trade, and a short biographical sketch of the Weighmaster. They will also find a communication from a Minnesota shipper on "Short Weights at Chicago," in which he merely echoes a complaint frequently made. We have published a number of communications on this subject during the two last years, and will be pleased to publish more of them until the cause of the trouble is removed. Whenever shippers suffer from shortage in any terminal market, we will consider it a favor if they will send us their weights together with terminal weights, and the name of the elevator receiving the grain.

At present the weighing department acts as the unprejudiced agent of seller and buyer in only five public elevators in Chicago. The private elevator men, however, consider the department weighers desirable, and thirty-five weighers are employed in private houses. As the fee for weighing in private houses is more than three times as much as for weighing in public houses, the natural conclusion is that the service is worth the price, else private elevator men would not voluntarily employ the services of the department in the face of such great discrimination against their houses.

The placing of department weighers in all public elevators would surely not result in such

wretched service as to cause more complaints to be made than are made at present. Judging from the complaints of shortages made to this journal, shippers of grain to the Chicago market have everything to gain and nothing to lose by demanding department weights.

GRAIN INSPECTION WAR AT KANSAS CITY.

Kansas City's grain trade has been unfortunate in that it has been afflicted at times with uncertain inspection. The Missouri state inspection *a la telephone*, which brought so much discredit upon the inspection at that point, was the first to work injury to the trade of the city. Opposing inspection departments and different grades followed in the work of destroying what little reputation the grades of that market had left. The variety of grades and inspection added so much to the confusion and discredit to the market that one set of grades was finally abandoned, and the grading of the Kansas City, Kan., inspectors was accepted by dealers on both sides of the line.

The Kansas department had been doing good work, and its work seemed to be satisfactory. But no sooner had Eastern receivers gained confidence in the gradings of this department than populist leaders of Kansas, prompted by avarice and jealousy, organized a board of trade at Argentine, Kan., a suburb of Kansas City, and attempted to inspect grain received at the two elevators in that district against the will of the elevator owners. The regular inspectors were arrested, and the work of the department greatly interfered with. We regret to state that the chief inspector for Kansas is supporting the Argentine Board of Trade. If they are victorious, confusion will be added again to the grades and gradings of that market, and its grain business will suffer.

Uniformity and the maintenance of grades are absolutely necessary for the inspection of any market to be of value to the trade. If otherwise, their service is worse than worthless.

THAT STATE ELEVATOR IN MINNESOTA.

The Minnesota Alliance is furious over the final result of the Elevator Bill. It passed the Minnesota Senate with the understanding that it would be strangled in the House; but the House passed it by a vote of 84 to 21, and Governor Nelson signed the bill, making it a law.

But there are several troublesome things in the way of realizing the state ownership of a state elevator at Duluth or anywhere else. The bill originally appropriated \$230,000 to build a 2,500,000 bushel elevator at Duluth, and the railroad and warehouse commissioners even went to Duluth to select the site. As we understand the matter, only an elevator of 1,500,000 bushels capacity was contemplated; but the appropriation was insufficient even for this. The law requires a costly construction of hoppers bins, and an elevator of even half that size would exhaust the appropriation, not to mention the cost of a site, which is figured at from \$20,000 to \$60,000.

But a still more serious obligation seems to be in the way. The attorney-general has construed the law, and his construction has set Donnelly and the Alliance wild with rage. The law contemplated the erection of the elevator from public funds, the latter to be reimbursed from the fees of state inspection. Now the attorney-general comes forward and says that the law in no wise affects or repeals the other warehouse law, but provides a larger schedule of fees for the state warehouse because of greater advantages conferred. The fees are held not to be increased in other public elevators under the charge of the Commission. Consequently, Mr. Donnelly furiously

remarks: "As the grain cannot go into the elevator until it is built, and as it cannot be built until the grain goes into it, the result will be that the elevator will never be built nor the inspection fees collected." Which will be made clear to the people who have never yet profited by the experiments of government going into business?

A NEW WAY OF SQUEALING.

An extraordinary story comes from Paris, which, though sounding decidedly like a fish-story, is nevertheless duly certified as authentic. We repeat it because it tells of a new way of settling up speculative scores.

In Paris lives Monsieur Michael Ephrussi, a Greek, we should infer from his name, but originally from Odessa, and in the grain trade. Monsieur Ephrussi bears the Parisian title of "The Wheat King," and is something of a plunger, after the Partridge or "Old Hutch" order. Not long since he imparted some market news and advice to his dear friend Vicomte Gaston de Breteuil, who took the advice and paid 400,000 francs for it, though the advice itself was given free gratis. Thereupon Monsieur le Vicomte did not blow his brains out, or jump in the Seine, or take to drink, or any of that sort of thing. He paid up promptly, and plotted a new way of getting even. He simply met the "Wheat King" and gave him an "option;" but quite a different option from the market article. He allowed Monsieur Ephrussi to do one of three things: resign from the swell club of which they were both members, fight a duel, or give 1,000,000 francs to the poor.

We don't know what might have happened if the Wheat King had declined to do any of the three things. Probably something too awful to talk about; possibly, like Bunthorne, the Vicomte might have said "damn" to the Wheat King, or even tweaked his nose. But the prompt action of the Wheat King saves us from conjecture. He was too rich to fight, too much of a Parisian to resign from his club, and so he gave up a million francs to the poor of Paris.

Unquestionably, there is a moral imbedded in this story; but we cannot lay our hands on it. Anyhow, the reader can ponder it to his amusement if not instruction.

THE ALL WATER ROUTE FOR GRAIN.

The railroad elevator pool of Buffalo and New York are working harder than ever this season to drive Erie Canal boatmen out of business, and that prince of hypocrites, the Governor, is helping them. He proposes to propel the boats by electricity, and estimates that the cost of equipping the canal with the trolley system, including power houses, would be \$1,000,000. He knows as well as anyone that it is not power the boatmen lack, but a channel to run their boats in. While he was suggesting a fool scheme to divert the attention of the gullible from the real wants of the canal, he could with as much show of reason have added a scheme for lighting and heating the canal.

It matters not what the power is, canal boats can not be run through the mud at a profit. The Erie Canal must be deepened so that boats can take a full load, and the locks must be lengthened so more boats can pass through at a time. If it is not soon done the canal will cease to effect the annual spring decline in grain rates to the seaboard. Western shippers will not long tolerate extortion by the New York pool. Unreasonable rates in New York would soon drive the bulk of the trade down the St. Lawrence, and Buffalo and New York would suffer a loss of much of their grain trade.

EDITORIAL MENTION

ATTEND the Hay Men's Congress in Chicago, June 27.

SEND us news of your district of interest to the members of the grain trade.

Do you want any information relating to the grain trade? If so make use of our "Notes and Queries" column; it's free to all.

We are always pleased to publish the opinions of anyone connected with the trade on any subject bearing on the grain business.

WESLEY CORNS has been elected mayor of Ironton, Ohio, for the thirteenth consecutive time. Ohio is not a great corn state either.

ALEXANDER L. LINEFF called at our office the past month. Mr. Lineff is from St. Petersburg, and is examining the American elevator system.

THE wheat crop of Bengal is nearly thrice as large as last year. However, this only means an increased yield of five or six millions bushels.

JOHN MANSFIELD, for six years a member of the Committee on Appeals of the grain inspection department, Chicago, has been succeeded by Peter M'Gurn.

THE Charles Munson Belting Co., of 22 South Canal street, Chicago, will send an excellent guide to the World's Fair and Chicago to anyone sending address for same.

IF country grain dealers will send us the condition of the growing crops in their districts and the stocks in store and farmers' hands we will publish the most reliable crop report compiled.

CALL at the office of the AMERICAN ELEVATOR AND GRAIN TRADE, Room 5, 184 Dearborn street, Chicago, and get a Souvenir Guide to Chicago and the World's Columbian Exposition, free of charge.

WE will be pleased to receive each month for publication in our new department "The Markets," a brief review of the conditions ruling in the different terminal markets. Let us hear from you.

SUPPORT the journal published in the interests of your trade by subscribing for it. If you will take it regularly and read it carefully you will get many times the value of your money, even if it is the poorest trade journal published.

THE cry of the anti-optionists, who were recently caught short in the Chicago market, is still echoing through the land. The contortions of these traders who want the government to stop the trading in futures is truly amusing.

ONE boat running between Buffalo and Toledo ran short of fuel and burned \$300 worth of wheat to reach port. Coal is hardly dear enough to justify that sort of thing. Perhaps that is where some of the grain shortages so common at Buffalo come in.

ONLY one road, the "Soo," has so far conformed to the ruling of the Inter-state Commerce Commission in regard to discriminating in wheat rates in favor of Duluth as against Minneapolis. It is hinted that the other roads will await

action in the courts by the Commission. They are said to be advised by their attorneys that the Commission is practically without power to enforce its decisions.

ANOTHER all water route threatens to cut into the grain-carrying trade of the railroads. Kansas City merchants are anxious that their city should become a greater market, so propose to give greater support to steamboat lines between New Orleans and Kansas City.

GRAIN dealers visiting Chicago during the World's Columbian Exposition should make it a point to call at the office of the AMERICAN ELEVATOR AND GRAIN TRADE, Room 5, 184 Dearborn street, and get free a copy of our Souvenir Guide to the exposition and Chicago.

PEORIA grain men are objecting to Senator Arnold's bill which would compel them to come under state inspection. Peoria is a peculiar market, and regulations that would apply to almost any other market in the country would be onerous in Peoria, where there is no dealing for future delivery.

WE have received the 1893 catalogue of the York Foundry and Engine Co. of York, Neb. It is a creditable work of nearly 150 pages, where pretty nearly everything used in an elevator is appropriately noted and priced. It will be sent to grain and mill men who will write to the firm requesting it.

CHICAGO is sadly in need of grain transfer elevators. Kicking by country shippers has been influential in securing the erection of one recently. More kicking on account of short weights and stolen grain will secure the erection of others. If railroad officials are not continually reminded of the wants of the trade, they will make no effort to supply them.

AN effort is being made to have a Hay Men's Congress in Chicago, June 27. A convention of hay dealers at that time should command a good attendance. Many dealers will attend the Fair, and most of them would be pleased to profit by the privilege of meeting with brother dealers, and comparing notes regarding abuses suffered and reforms needed in the trade.

ONE standing item in the newspapers will have to be "killed," we mean the one in reference to the vast number of bushels of grain shipped across the Atlantic, "not one bushel of which was carried in an American bottom." Last year 175,000 bushels were carried in vessels of American register. It was not much, but enough to break the "hoodoo" of the item.

THE crop reports of the Agricultural Department have puzzled some, in that they did not know what the Department accepted as 100. Statistician Robinson has recently given it out that "Correspondents, viewers, and appraisers report to this department conditions by percentages, using 100 as the standard. One hundred represents a full, normal condition, absence of all impairments and medium growth and development of the plant in the section reported."

THE suit of the Union Elevator Company of Toledo, Ohio, for an injunction restraining the members and officials of the Toledo Produce Exchange from inserting any clause in their contracts excepting grain delivered by the Union Elevator, has been brought upon novel grounds. The plaintiff claims that defendant by publicly announcing on the floor of the Exchange that no grain would be received from the the Union Elevator have prevented the company from giving the services to the public that are required of a public warehouse. A. L. Backus, president of the Union Elevator Company, has au-

nounced his intention to commence suit under the Sherman anti-trust law to recover the amount lost by him in the past four years by reason of the alleged discrimination. The suit is against the members as individuals and does not directly concern the Exchange as a corporation.

FRIENDS of the Anti-Option and Pure Food bills will hold an informal meeting in St. Louis this month to consider the best means of getting their notions enacted into legislation. The outlook for both bills, if re-introduced in the next congress is not particularly bright; and those who are posted claim that both bills will run against the presidential veto, even if they pass the gamutlet of the senate and house.

ACCORDING to an address delivered at the recent meeting of the Hay and Straw Dealers' Association of New York, part of which is published elsewhere, the hay trade has not yet arrived at that state of perfection which admits of no improvement. However, it is not the playground of half the abuses that burden the grain trade and will continue to do so until dealers combine and persistently fight them.

AN Eastern correspondent, signing himself "Hudson," draws a very doleful picture of the way his orders for grain are filled by Western shippers. Buyers should not order grain by the car without having an understanding as to how much constitutes a carload. It would prove more satisfactory to order by the bushel, and then insist that car should contain within two per cent. of the amount ordered. Then if shipper sent a large carload when a small one was ordered, and the market declined, the loss on the excess of amount ordered would be on him.

THE Chicago Grain Receivers' Association could well afford to secure a meeting-place at the Exposition grounds, and provide an interesting programme for the entertainment of grain shippers. Shippers and receivers would surely profit by becoming better acquainted with one another. Shippers would enjoy visiting the World's Fair together, and would rather come at a time they could attend a trade convention than any other. Grain dealers should have a day at the Fair, and if any organization of dealers will call a meeting here, we will make a vigorous attempt to let all the members of the trade know it.

ONE of the fool bets that crop out every four years has got into court. Over in Michigan, in 1888, a fanning-mill man sold mills to parties, the contract reading that they were to be paid for "when Cleveland was elected President of the United States." As Cleveland was defeated that year, the fanning mill man was out; but as he was elected last year, he concluded to sue the parties on the contract. He probably has a good case; but one hardly knows which to regard as the greater idiot in such transactions—the seller or buyer. It is a mixture of business and gambling that entitles both buyer and seller to get left, as they seem to have been in the present case.

EDWARD L. HARPER, who ran the big corner in Chicago in 1887, and was sentenced to the Ohio penitentiary for ten years for wrecking the Fidelity National Bank, was released May 1, 1893. The Harper corner was perhaps the most dramatic ever run in Chicago. It was almost successful; but on June 21 the corner broke, wheat dropping from 93 to 71 cents within an hour after opening. He was shown to be a defaulter to the extent of \$3,500,000. A great deal of sympathy has been wasted on this accomplished scoundrel instead of his victims. Even when he was prosperous he was utterly without principle. "Billy" McHenry tried for years to satisfy a judgment for \$25,000 against

Harper, incurred as his broker in the "Handy" grain deal of 1882, but was never able to get his hands on anything tangible. It is to be hoped that Harper's incarceration has had a beneficial effect on him.

THE Chicago Board of Trade adopted an amendment to its rules, May 13, by a vote of 257 to 151. The amendment provides that "Any offer to buy or sell on a time contract any commodity dealt in under the rules of this association by a member of the association, when made openly in the exchange hall during the hours for regular trading, may be accepted by any other member at the time such offer is made, and the contract shall be made with the member first accepting such offer."

Up in Minnesota a sharp game is being worked on the farmers. Circulars are sent out asking farmers to send in a bushel of wheat, charges prepaid, promising to sort each bushel, taking out defective grains, after which the wheat is to be put into a glass case for exhibition at the World's Fair, labeled with the name of the farmer and the location of his farm. It is said that thousands of bushels of wheat have been sent in by farmers, so fast, in fact, that several teams have to be employed to haul it to the elevators, when after a half-pint bottle is filled, the rest of the wheat is sold.

In this issue appears an illustrated description of the largest storage elevator in the world, which, despite the extremely bad weather at Chicago during April, was constructed in the short period of 33 days. The building of the little Hess elevator, which is illustrated on page 368, in two weeks, was considered remarkable; but, well, that was six years ago. The advancement made in ways and means of constructing elevators since then, and the greater advance made by expert builders in the art of building good houses quickly, is responsible for the more rapid construction of the new house.

We are indebted to Geo. F. Stone, Secretary of the Chicago Board of Trade, for a copy of the Thirty-fifth Annual Report of the business of Chicago. It is by far the most complete report ever issued, and Mr. Stone is entitled to great credit for the able manner in which the compilation has been made. One point of interest shown in the report is the decrease of speculative business in 1892, as shown by the Board of Trade Clearing House. The total clearances for the year aggregated \$69,295,992.62 against \$104,083,529.57 for 1891. This decrease was due primarily to the threatened anti-option bill, and secondarily to the low prices of produce.

LOANING sacks to farmers has long been a burden to the country dealers of many districts, and in some parts of the country they have rightly decided to discontinue the practice. At a recent meeting of dealers and millers of Eastern Indiana at Winchester, they decided to stop loaning bags, May 1, and we trust that all have and will live up to the agreement. Sacks loaned to farmers are lost, stolen and destroyed by being used for purposes other than intended by the lender. The first cost, too, is considerable of a burden on the dealer. Dealers might, with as much reason, offer to haul the grain from the farm, to harvest or to plant it. The practice should be followed by none.

A NORTH-WESTERN farmer has suggested that all the abuses of the grain trade can be obviated, and the country dealer ignored, by conveying grain from the farm to the central market in bags. Country elevators would not be needed, and no dirt would be removed in the country. Shipments might be made in twice the time it takes now, and the expense of handling might be twice as great. As the bags would undoubt-

edly have holes in them before they got to market, we suggest that steel tanks be used. With all the marketed grain at terminal markets, and in sight, a depression would follow the three first months of the trial of such a scheme that would make farmers too weak to sack any more.

REPORTS from European wheat importing countries give the prospects for this year's crop as not very promising. The *Liverpool Corn Trade News* of recent issue says: "We are surprised to learn of genuine cases of lenten wheat being plowed under in this country; a number of instances have happened in France and Germany, but we did not think that the need for such a drastic measure had occurred in the United Kingdom, but from several informants and correspondents it appears that it has been necessary, and on quite a large scale. One reliable authority tells us of a case where 50 acres were so treated last week in Herefordshire, and in many other districts we hear of similar cases. It is now quite certain that the wheat area in the United Kingdom this season will be under 2,000,000 acres, probably considerably so."

EXPORTS OF GRAIN.

The last report of the chief of the bureau of statistics shows that our exports of breadstuffs have declined materially during the ten months ending with April. During these months the valuation of the exports was \$157,653,913, against \$253,065,629 for the corresponding ten months of 1891-2. The April exports were valued at \$12,621,155, against \$19,905,717 for April, 1892.

The exports for the ten months ending with April included 95,775,419 bushels wheat, 29,132,609 bushels corn, 876,917 bushels oats, 1,171,253 bushels rye, 2,394,464 bushels barley and 13,606,205 barrels wheat flour, compared with 133,110,877 bushels wheat, 64,893,844 bushels corn, 7,561,322 bushels oats, 10,919,651 bushels rye, 2,714,182 bushels barley and 12,385,177 barrels wheat flour for the corresponding period of 1891-2.

The unfavorable aspect of exports for the past ten months is disappointing only when compared with the phenomenal period preceding, when our exports ran up to high water mark.

THE ELEVATOR COMPANIES ARE HAPPY.

The late opening of navigation is a good thing for elevator stockholders at Duluth, whether it is for vessels or not. The owners of the wheat stored in Duluth elevators do not relish it, however. There are sixteen millions and more bushels of wheat stored in the elevators there now. Winter storage on all this wheat expires May 15. Ordinarily a large amount of wheat is shipped out before that date, and no more storage charges accumulate for the holder of the wheat to pay. This year not a bushel will get out of the elevators before that date, and after the 15th a half cent will be added to the elevator charges on the 16,000,000 bushels. The extra charges will amount to \$80,000. Of course, with the early opening of navigation the larger proportion of the wheat would still remain on the 15th, but it is safe to say that at least \$20,000 will find its way into the hands of the elevator companies because winter stayed with us so long.—*Minneapolis Market Record*.

EXPORTS AND IMPORTS OF FLAX-SEED.

The exports of flaxseed in March were 43,304 bushels, against 40,136 bushels in the preceding March; and during the nine months ending with March the exports were 1,666,394 bushels, valued at \$2,000,172; against 3,551,927 bushels, valued at \$3,849,852, during the corresponding period of 1891-2.

The imports of flaxseed in March were 10,415 bushels, against 281 bushels in March, 1892; and in the nine months ending with March the imports were 52,359 bushels, valued at \$72,700; compared with 251,116 bushels, valued at \$273,407, in the corresponding period of 1891-2.

Trade Notes.

Honstain Bros., elevator architects and builders of Minneapolis, Minn., have moved their offices to 116 and 118 Corn Exchange.

The Columbian Scale Company has been incorporated at Pleasant Hill, Mo. The capital stock is \$75,000, and the incorporators L. G. Clauson, E. G. Wheeler, G. T. Ware, John T. Russell and A. W. Rung.

The Pneumatic Malt & Grain Drying Company has been incorporated at Chicago, to manufacture grain drying machinery. The capital stock is \$100,000, and the incorporators are Charles H. Dassenbrook, Carlton Pronty and Stack W. Osgood.

The Weber Gas and Gasoline Engine Company of Kansas City, Mo., has a large number of orders on hand in each of the following states: Kansas, Minnesota, Michigan, Illinois, Missouri, Iowa, Nebraska, Colorado and Texas; also in Oklahoma Territory. The company is now building a pair of large engines, aggregating 110-horse power, for the "Rankin Roller Mill" at Booneville, Mo.

The Jeffrey Manufacturing Company of Columbus, O., has issued a new catalogue, giving illustrations, descriptions and prices of its well-known elevating and conveying machinery, chain belting, pulleys, buckets, rope transmissions, etc. The letters of commendation that have been included in preceding catalogues have, however, been omitted, as the company is too well-known to make testimonials necessary. To any desiring such, numerous letters will gladly be furnished.

The Philadelphia Engineering Works, Limited, have contracted with the Poughkeepsie Iron Company for a complete blast furnace plant at Poughkeepsie, N. Y. The plant will be equipped with 3-19x60' Gordon, Whitwell-Cowper Fire Brick Hot Blast Stoves, three Corliss Valve, Horizontal Blowing Engines, 84" diameter of blast cylinder, 50" diameter of steam cylinder, 72" stroke of their latest patterns and designs, 1,200-horse power of Sterling boilers, and all the pumps and piping necessary for the plant. The whole work will require about one million fire brick, the orders for which have been placed with Mr. C. N. Christie of Poughkeepsie, N. Y., and Mr. John B. Marie of Philadelphia. The plant is to be completed and ready for operation the latter part of October.

The Sykes Steel Roofing Company of Chicago and Niles, O., writes us: "The location of our exhibit at the World's Columbian Exposition is in the north end of the Manufactures and Liberal Arts Building, the largest in the world. Take first stairway east of center entrance on the north. We have space in section E on gallery floor, second space east after landing in gallery, where our Mr. R. G. Sykes, a pioneer in the manufacture of iron and steel roofing, may be found, who will be pleased to meet all of our patrons, agents, and any and all who feel interested in iron and steel roofing, siding, etc., or in steel lath. All are cordially invited to drop in and see us, where we shall try to make all welcome, and a call interesting as well as instructive. We shall be provided with easy chairs, where visitors can rest and write a letter. They are invited to make our pagoda their headquarters while on the grounds. The Sykes roofing has been used in every state and territory in this country, also in many foreign countries; therefore we hope, and expect, to meet thousands during the fair, who have used our roofing, siding, steel lath, etc. We shall also be pleased to have those interested call at our office and works, 611 S. Morgan street, city, where you will also be made welcome."

Hay barns and hay storage warehouses are generally classed as extra hazardous risks by insurance companies and many of them refuse altogether to write policies on them. A number of shippers have no insurance at all, for the reason that none of the companies represented by their local agents will carry them, but there are good companies who will. A Mutual Hay Insurance Company could do a good business.

ELEVATOR AND GRAIN NEWS

O. A. Means will build an elevator at Anchor, Ill.

Citizens of Sioux Falls, S. D., will build a tow mill.

M. A. Andrews will build an elevator at Gilmer, Ill.

P. H. Hoare, grain dealer at Haywards, Cal., has sold out.

J. W. Knight of Glens Falls, N. Y., will build a brewery.

W. N. Knight, of Kite, Ga., will build a rice mill at Nullin, Ga.

Northey & Duncan of Woonsocket, S. D., will build an elevator.

C. H. Caldwell, grain dealer at Fitchburg, Mass., has sold out.

G. H. Raymond of Buffalo, N. Y., will start a floating elevator.

An engine house is being built for the grain elevator at Marion, Pa.

A rice mill will be built at Crowley, La., by a new stock company.

Mr. Knapp of Minooka has bought the grain elevator at Lasant, Ill.

The large new rice mill at Lake Charles, La., will soon begin hulling.

A malt house will be built at Omaha, Neb., by Peterson & Bowen.

J. W. Macy contemplates building an elevator and mill at Atlanta, O.

The machinery is being placed in the new tow mill at Buffalo Centre, Ia.

John J. Atkinson has opened a grain commission office at Superior, Wis.

An elevator will be built at Ironton, O., by the Goldcamp Milling Company.

S. K. Nester of Geneva, N. Y., will build a malt house at Waterloo, N. Y.

Thompson & Lewis are building a 20,000-bushel elevator at Vermillion, S. D.

T. M. Sleeper & Co., dealers in grain and feed at Waco, Tex., have sold out.

Rockwell & Ellis have started their new "Zenith Elevator" at Superior, Wis.

McMillan & Leggett, dealers in grain and hay at Butte, Mont., have sold out.

F. A. Scott of Eagle Grove, Ia., is having a tall chimney built for his elevator.

Henry Allen & Co., dealers in grain and stocks at New York, N. Y., failed May 1.

Thompson & Cumming, grain dealers at Baltimore, Md., have dissolved partnership.

Robert Schnell is greatly increasing the capacity of his tow mill at Watertown, Minn.

J. L. Henderson & Sons, dealers in grain and feed at Washington, Pa., have sold out.

The Atlantic Elevator Company has begun work on a new elevator at Carrington, N. D.

E. M. Higgins has been buying high grade wheat at Minneapolis for Armour of Chicago.

Ford & Rowe of Oneonta, N. Y., are preparing to build a grain elevator and feed store.

Counselman contemplates building a 3,000,000-bushel elevator at South Chicago, Ill.

Nichols & McRae, grain dealers at Waterville, Kan., have been succeeded by McRae & Zeller.

Booth, Edwards & Co., dealers in grain and hay at Bartow, Fla., have dissolved partnership.

H. N. Beakley & Co., dealers in grain and wool at Coleman, Tex., have dissolved partnership.

The "Northwestern Elevator" at Bellingham, Minn., which was recently burned, will be rebuilt.

T. Gilmore & Co., dealers in grain and groceries at Brockville, Ont., have dissolved partnership.

Halsey & Banta, dealers in grain and flour at New York, have been succeeded by F. A. Halsey.

The Moosomin Elevator Company's plant at Moosomin, Assa., has been sold to satisfy creditors.

Frank Brown, grain dealer of Grant, Ore., contemplates engaging in business at Spokane, Wash.

The Barnard & Leas Manufacturing Company of Moline, Ill., has recently sold one Little Victor Corn

Sheller and one Little Victor Corn Cleaner to the Case Manufacturing Company of Columbus, O.

Counselman & Co. are moving their elevator at La Porte City, Ia., to Armstrong, Emmett county.

Hottel & Kamm, grain dealers of Milwaukee, Wis., will build a large malt house at Superior.

Hunt & Gray, dealers in grain and salt at San Antonio, Tex., have been succeeded by J. L. Hunt.

The Midland Iowa Elevator Company of Sioux City, Ia., recently transferred warehouses to creditors.

The St. Jacob's F. M. B. A. Elevator Company of St. Jacobs, Ill., has increased its capital to \$7,000.

The Midland Iowa Elevator Company of Sioux City proposes to build elevators in Nebraska and Iowa.

Keen & Russell, grain dealers and millers at Mt. Carmel, Ill., have been succeeded by Holsen Bros.

G. G. Moore & Co., commission dealers in grain and provisions at Chicago, have dissolved partnership.

Whitmore Bros. of Montevideo, Minn., contemplate enlarging their elevator to 60,000 bushels capacity.

The Chicago Pneumatic Malt Company has been incorporated at Chicago with \$200,000 capital stock.

A public grain elevator company has been organized by merchants and farmers of Gallatin county, Mont.

The Lewis-Sharpe Commission Company of St. Louis, Mo., has increased its capital stock to \$100,000.

The Blake Elevator Company of Ely, St. Louis Co., Minn., has \$50,000 capital stock, of which \$14,000 is paid.

Whalen & Co. of Minneapolis, Minn., will rebuild their elevator at Westport, S. D., which was recently burned.

The new warehouse of the Farmers' Terminal Warehouse Company at Tacoma, Wash., is to be 160x600 feet.

The elevator men of the Northwest are shipping grain freely, a fair proportion being consigned to Chicago.

Noble Bennett, wholesale and retail dealer in grain and flour at New Britain, Conn., has sold his retail business.

Frostrom & Co., grain dealers, and the Malmo Elevator Company of Malmo, Neb., have been united in one firm.

Eight grain elevators are being built on the C. & N. W. Ry. by the Eagle Roller Mill Company of New Ulm, Minn.

Wagon dumps will be put in at all the country houses by the Midland Iowa Elevator Company of Sioux City, Ia.

An elevator of 160,000 bushels' capacity has just been completed at Geneva, Ill., for the Chas. Pope Glucose Works.

New machinery to double the output is being placed in the flax mill of the American Flax Fibre Company at Austin, Minn.

S. V. White, the grain dealer and stock broker of New York, failed again recently during the flurry in stocks at that city.

The firm of Harris Bros. has been incorporated at Tacoma, Wash., to deal in grain and hay and to do a commission business.

Mr. Granger of McHenry, Ill., will move his grain elevator by order of the railroad company to make room for another track.

Gordon W. Hall has bought the "Frontier Mill" at Buffalo, N. Y., and will remodel it into an elevator for handling canal grain.

About \$10,000,000 worth of wheat in Superior and Duluth elevators changed hands Monday, May 1.—*Indian Ocean, Superior, Wis.*

The building of Cargill Bros' new terminal elevator at Superior, Wis., has been completed, and the machinery will soon be placed.

The erection of another transfer elevator is talked of at Decatur, Ill. Among those interested are W. T. Roberts & Co., grain dealers.

Shaw & Anderson, grain dealers and proprietors of a general store at Rockport, Ill., have been succeeded by Shaw, Anderson & Taylor.

Osborne & McMillan, elevator men of Minneapolis, Minn., will build a 750,000-bushel house at that city, to be completed by September 1.

H. Mueller & Co. of Chicago have bought three No. 1 Barnard Elevator Separators of the Barnard & Leas Manufacturing Company, Moline, Ill.

Armour's new elevator at Chicago, known as "Annex B," of 3,500,000 bushels capacity, was recently declared regular by the Board of Trade.

Weighing charges at Chicago are as follows: Grain, by cargo, from elevator to vessels, per thousand bushels, 20 cents; grain, from canal boats, per boatload,

\$1; grain in bulk, at regular transfer stations, per carload, 30 cents; flaxseed in bags or bulk, per car, not including handling labor, 30 cents.

The Planters' & Merchants' Oil Mill Company has been incorporated at Groesbeck, Tex., with \$50,000 capital, to build a cottonseed oil mill.

The Wisconsin Malt and Grain Company is building another elevator at Appleton, Wis. Work will soon be commenced on another malt house.

A grain elevator of 50,000 bushels' capacity will be built at St. Jean Baptiste, Man., in connection with a flour mill, if the proposed bonus is given.

O. Swainson of Pleasant Hill, Ill., is having a 10,000-bushel elevator built by Seeley, Son & Co., the architects and builders of Fremont, Neb.

Enos Clarke of Arapahoe, Neb., has bought a three-roller feed mill of the Willford & Northway Manufacturing Company of Minneapolis, Minn.

Wheat cleaners made by Huntley, Cranston & Hammond of Silver Creek, N. Y., have been placed in the new "Belt Line Elevator" at Superior, Wis.

P. Anderson & Co. of Oketo, Kan., have recently bought one No. 2 Victor Corn Cleaner of the Barnard & Leas Manufacturing Company, Moline, Ill.

Adams & Cole of Tonlon, Ill., have bought a three-roller feed and corn mill of the Willford & Northway Manufacturing Company of Minneapolis, Minn.

S. H. Craumer of Aberdeen, S. D., has bought a three-roller feed mill of the Willford & Northway Manufacturing Company of Minneapolis, Minn.

Elevator men in Western Missouri and Kansas are taking in very little wheat because the farmers are holding for \$1 per bushel and only 70 cents is offered.

The "Dallas Elevator" at Dallas, Tex., with its three country houses, has been bought by capitalists of Chicago and Milwaukee, who will take possession June 1.

The United Elevator company of St. Louis, Mo., will build another elevator of 1,000,000 bushels capacity. The company recently declared a 6 per cent. dividend.

The Porter Cattle Company has been incorporated at Des Moines, Ia., to handle grain and livestock. Capital stock, \$100,000; incorporators, H. B. and H. M. Porter.

The wheat in the M. & N. Elevator Company's warehouse at Vineland, Minn., which was damaged by the recent flood, has been purchased by A. Hulm of Minneapolis.

Honstain Bros., architects and builders of grain elevators of Minneapolis, Minn., have begun work on an 80,000-bushel elevator for Jennison Bros. & Co. at Janesville, Minn.

The rumor that "Union Elevator No. 2" at Peoria, Ill., is to be taken down is denied by an official of the C. B. & Q. Railroad Company. However Union No. 1 will probably be removed.

The Barnett & Record Company of Minneapolis, Minn., has been awarded the contract for a 1,000,000-bushel storage house to be built at Minneapolis for the Mulford Elevator Company.

Seeley, Son & Co., architects and builders of grain elevators at Fremont, Neb., are building a 50,000-bushel Seeley Elevator at Minco, Ind. Ter., for the Minco Mill & Elevator Company.

The Danielson Elevator Company has been incorporated at Lake Park, Minn., to own and conduct elevators and warehouses and buy, sell, handle, store and ship grain. Capital stock \$10,000.

D. L. Martin of Milwaukee, Wis., recently purchased a large quantity of wheat that had been damaged in the burning of Kehler's elevators and mill at Litchfield, Ill. The price was \$15,000.

Messrs. Becker and Mills of the state railroad commission, and A. C. Clausen, chief grain inspector, have been examining the various sites offered at Duluth for the proposed Minnesota state elevator.

Oats are worth more per pound than wheat in Michigan, where a bushel of oats weighing 32 pounds brings the farmer from 38 to 41 cents, while a bushel of wheat weighing 60 pounds brings him 64 to 65 cents.

The Illinois Central Railroad Company will build another grain elevator at New Orleans, La., not on the river front but in the center of the city, as the new elevator is intended to supply grain for home consumption.

Stocks of corn in cribs along the Burlington road in Nebraska aggregate 4,000,000 bushels, exclusive of shelled corn in elevators. Along the Union Pacific and Grand Island roads more corn than ever before is reported in cribs.

Frank Kancher, the grain elevator architect of St. Joseph, Mo., was recently awarded the contract to build an elevator at Richmond, Va., for the Chesapeake & Ohio Railway Company. The building is to be covered with corrugated iron, with brick boiler

house, four elevators, two of which will be two-leg elevators, together with double hopper and wagon scales. The elevator's capacity will be 100,000 bushels.

The La Salle Street Commission House has been incorporated at Chicago to do a commission business in grain and provisions. Capital stock \$25,000; incorporators Charles D. Cole, William H. Murdock and David McKeerton.

The Simpson & Robinson Company of Minneapolis, Minn., architects and builders of grain elevators, recently finished the 200,000-bushel elevator and mill building, according to the contract, for the Minkota Milling Company at Superior, Wis.

Kendall & Smith, grain dealers at numerous points in Nebraska, are financially embarrassed, and have given bills of sale of many of their houses. They owe \$25,000 to the president of the Columbia National Bank of Chicago, which failed recently.

Receivers of hay have experienced great difficulty in disposing of their consignments during the past two or three weeks, as a good portion of the receipts arrived in a heating condition, and sold for freight charges. — *Trade Bulletin, Chicago, May 3.*

Nearly 50,000 bushels of wet grain, mostly wheat, have been received at Buffalo since the opening of navigation, which exceeds the total for any preceding period. The grain drying elevators at Buffalo must be doing a good business with wet lake cargoes.

The Superior-Dakota Elevator Company has been incorporated at Superior, Wis., to build an elevator and deal in grain. Capital stock, \$100,000; incorporators, E. J. White, Chicago; H. Steele, G. W. Horton, Duluth; G. Hillyer, L. Hanitch, W. Seager, West Superior.

The suit of H. J. Gude against the Exchange Insurance Company to recover the insurance on Gude Bros' elevator at Duluth, Minn., which was burned nearly two years ago, will soon be decided, the final hearing in the State Supreme Court having been closed April 29.

Geo. N. Reinhardt & Co. of New York have just completed a new elevator in connection with their hay warehouse at Melrose Station in that city. The capacity is 30,000 bushels of grain and 8,000 bales of hay. They are the only receivers of grain, hay and feed at that station.

The shrinkage of wheat from the time it is threshed is given as two quarts to the bushel by a keen observer, or six per cent. in six months, even under the most favorable circumstances. One hundred bushels of corn in the ear will shrink, it is said, to about 80 bushels in one winter.

James Stewart & Co., architects and contractors for elevators, have just been awarded the contract for a 1,500,000-bushel house for Messrs. Gray & Northrup of Buffalo, N. Y., to have nine legs with a capacity of 450,000 bushels per day, and to be modern in every detail of its construction. The cost is estimated at \$300,000.

M. J. & W. A. Brown, dealers in grain and hay at Baltimore, Md., have dissolved partnership. Two new concerns have been formed by the old partners, M. J. and W. A. Brown alone retaining the old firm name, and W. J. G. R. and M. M. Brown continuing business at the old stand under the firm name of W. A. Brown's Sons.

Van Tassell, the elevator man of New York, has brought suit against Beecher & Benedict, insurance brokers, for \$20,000. The brokers agreed to place \$30,000 insurance, but they had not secured more than \$10,000 before the elevator burned. By their failure to place the insurance promptly Mr. Van Tassell lost \$20,000, which he seeks to recover.

The sixth drawing of debentures of the Chicago & Northwest Granaries took place on Saturday, May 6 inst., at No. 1 Tokenhouse buildings, Lothbury, E. C., which debentures will be paid off at 10 per cent. premium on the first day of July next, at the bankers of the company, Messrs. Barclay & Co., 51 Lombard street, E. C. London, when interest thereon will cease.

IMPORTS AND EXPORTS OF HAY.

During March we imported 15,484 tons of hay, against 8,480 tons during the preceding March; and during the nine months ending with March we imported 70,828 tons of hay, valued at \$643,987; compared with 60,255 tons, valued at \$512,685, during the corresponding period of 1891-2. No foreign hay was re-exported during the nine months ending with March, against 102 tons, valued at \$926, for the corresponding months of 1891-2.

The exports of hay aggregated 2,206 tons during March, against 3,561 tons during March, 1892; and during the nine months 25,660 tons, valued at \$405,230, was exported; compared with 25,956 tons, valued at \$432,490, during the corresponding period of 1891-2.

Denmark will build grain elevators at the new "Free port" on a large scale, so as to accommodate grain laden vessels from America.

CORN SHIPPED TO FOREIGN LANDS.

The United States exported in March 1,911,020 bushels of corn to the United Kingdom, 129,776 to Germany, 386,213 to France, 521,171 to other countries in Europe, 182,215 to British North America, 199,938 to Mexico, 64,308 to Cuba, and 79,808 to South America; compared with 5,031,659 bushels to the United Kingdom, 3,098,639 to Germany, 101,991 to France, 2,778,320 to other countries in Europe, 115,681 to British North America, 100,563 to Mexico, 82,916 to Cuba, and 1,001 to South America in March, 1892.

During the nine months ending with March the United States exported 12,915,585 bushels of corn to the United Kingdom, 3,491,711 to Germany, 830,212 to France, 4,143,121 to other countries in Europe, 2,462,717 to British North America, 5,196,366 to Mexico, 17,936 to the Central American states and British Honduras, 732,868 to Cuba, 15,814 to Puerto Rico, 5,316 to Santo Domingo, 406,319 to the other West Indies and Bermuda, 332,277 to South America, and 17,615 to other countries, total 31,228,253 bushels; compared with 27,961,697 bushels to the United Kingdom, 10,796,592 to Germany, 1,181,455 to France, 13,323,876 to other countries in Europe, 2,603,730 to British North America, 359,039 to Mexico, 86,159 to the Central American states and British Honduras, 363,675 to Cuba, 12,553 to Puerto Rico, 215 to Santo Domingo, 381,741 to the other West Indies and Bermuda, 179,910 to South America, and 18,662 to other countries, total 57,575,367 bushels of corn exported during the nine months closing with March, 1892.

Fires, Casualties, Etc.

Charles Haring's brewery at Kearney, Neb., was burned recently.

A. Zoller & Bros' malt house at Davenport, Ia., was burned April 17.

J. & A. M. Dillenbeck's malt house at Arcadia, N. Y., was burned recently.

Jacob Betzner, grain dealer at Breslau, Ont., recently suffered loss by fire.

The brewery of the Kling Brewing Co. at Detroit, Mich., was burned April 19.

Burke's grain elevator at Friend, Neb., collapsed recently, being overloaded with corn.

The elevator of the Bosch-Ryan Grain Co. at Cedar Rapids, Ia., was damaged by fire recently.

E. Mergert & Son, dealers in grain and dry goods at Thorp Springs, Tex., recently suffered loss by fire.

J. H. Goodwin's grain elevator at Osage City, Kan., was burned April 25. Loss \$3,500; insurance \$3,000.

Baker & Holmes, dealers in grain and hay at Jacksonville, Fla., recently suffered \$1,600 loss by fire. Insured.

Whipple's elevator at Plainfield, Ill., was fired by a passing locomotive April 16. Quick work saved the building.

The "Northwestern Elevator" at Bellingham, Minn., was burned on the evening of April 22 with 18,000 bushels of wheat. Loss \$20,000; insured.

A hay press was recently burned at Point Pleasant, Pa., with 35 tons of hay, 2 horses and machinery. The body of the operator was found in the ruins.

John McHale, an employe at W. P. Harvey's elevator in Chicago was crossing one of the bins May 5 when his foot slipped and he dropped into the hopper, being crushed to death.

The "Novelty Elevator" of F. A. Thompson at Kansas City, Mo., was burned at 2 o'clock A. M., April 19. Loss \$4,000. The building had been abandoned and was being torn down.

F. A. Marsh's grain elevator at New Milford, Ill., was blown over by the strong wind of April 21. C. J. Radcliffe bought the wreck and removed it from the railroad track on which it fell.

Hay shed No. 2 of the Boston & Maine Railway Co. at Charlestown, Mass., was burned April 26 with a large quantity of hay consigned to Hosmer, Robinson & Co. of Boston. Loss \$25,000.

The new elevator at Westport near Aberdeen, S. D., owned by John Whalen & Co. of Minneapolis, was burned during the high wind of April 20 with 13,000 bushels of wheat, which was insured.

Fenwick's elevator at Alexander, Man., was burned May 3 with over 30,000 bushels of wheat. Although the house was full of wheat the heat was so intense that the grain was burned even to the middle of the pile. Loss over \$25,000; insurance \$13,000 on building

and stock. The fire is supposed to have started from a defective joint in a stovepipe.

High water wrecked the "M. & N. Elevator" at Belmont, N. D., recently. Out of 27,000 bushels of wheat it contained, about 12,000 bushels was washed away into the bottom of the river. Of the remainder half was water-soaked.

ITEMS FROM ABROAD

Holland imported 65,000 quarters of wheat and flour combined in March.

English farmers are sowing more oats and less wheat, the price of the former being relatively higher than that of the latter.

Drouth has caused great damage to the grain crops in Italy. It is estimated that the country will need to import 100,000,000 bushels of grain more than usual.

Australia and New Zealand have exported this year, up to April 22, 756,500 quarters of wheat and flour combined, against 395,500 in 1892 and 871,000 in 1891 during the corresponding period.

At Odessa, Russia, grain is delivered from the barges at $\frac{1}{2}$ to 2 copecks per pood, from the warehouses at the Peresep at 3 copecks, and from the Moldavanka warehouses at 4 copecks, into steamers for export.

Exports from Roumanian ports on the Danube River last year were 9,400,000 quarters of grain, against 9,600,000 the year before. The export of corn and barley decreased, while wheat increased. Nearly half of last year's exports were wheat, one-third corn and one-eighth barley.

Russia exported from January 1 to March 20 1,064,000 quarters of wheat, 234,000 of corn, 196,000 of oats, 104,000 of rye and 438,000 of barley, against no wheat, 28,000 bushels of corn, no oats, no rye and no barley in the corresponding period of 1892. (Exports were forbidden in the winter of 1891-2.)

India exported during the week ending May 6 700,000 bushels of wheat, of which 440,000 bushels were to the United Kingdom and the remainder to the continent. For the corresponding week of 1892, the shipments were 1,120,000 bushels. Since April 1, the shipments have been 2,220,000 bushels, of which 840,000 bushels were to the United Kingdom, and 2,980,000 bushels to the continent.

Russia exported from August 1 to April 1, according to the *Messenger of Finance*, St. Petersburg, 6,417,000 quarters of wheat, 789,000 of corn, 1,738,000 of oats, 757,000 of rye, 3,640,000 of barley, 59,000 of buckwheat and 94,200 sacks of flour, compared with 5,856,000 of wheat, 347,000 of corn, 1,192,000 of oats, 1,747,000 of rye, 2,087,000 of barley, 14,225 of buckwheat and 81,700 sacks of flour during the corresponding period of 1891-2. Wheat, corn, rye and buckwheat are figured at 480 pounds per quarter; barley at 400, oats at 300 and flour at 280 pounds per sack.

France imported from August 1 to April 1, in quarters, wheat, 3,083,000; corn, 751,000; oats, 264,000; rye, 2,700; barley, 550,000, and flour, 67,000 sacks; compared with, wheat, 10,145,000; corn, 367,000; oats, 247,000; rye, none; barley, 376,000, and flour, 607,000 sacks, during the corresponding period of 1891-2. The exports during the eight months were, wheat, 559,000 quarters; corn, 36,000; oats, 124,000; rye, 133,000; barley, 200,000, and flour, 457,000 sacks, compared with, wheat, 462,000 quarters; corn, 53,500; oats, 289,000; rye, 314,000; barley, 929,000, and flour, 455,000 sacks.

The three years' drouth in the grain growing section of Mexico has caused famine and disease. North of the City of Mexico the people have been driven by the pangs of hunger to eat food that is unfit for human beings. Good drinking water is a rare article. The typhus fever that first started among among the peons, or semi-slaves, has become epidemic, and in the City of Mexico is carrying off 300 per day, of all classes. Corn is worth \$14 per 300 pounds, and only the rich can buy. At every telegraph station a soldier reads all messages and intercepts any information to the outside world regarding the deplorable condition of affairs.

Austria-Hungary exported during the eight months from August 1 to April 1 213,000 quarters of wheat, 129,500 of corn, 468,000 of oats, 22,300 of rye, 1,401,000 of barley, and 194,500 sacks of flour, compared with 193,000 quarters of wheat, 559,000 of corn, 271,000 of oats, 125,000 of rye, 1,458,000 of barley, and 276,500 sacks of flour. The imports during the eight months were 25,500 quarters of wheat, 52,000 of corn, 32,500 of oats, 20,950 of rye, 18,500 of barley, and 410 sacks of flour, compared with 49,500 quarters of wheat, 83,000 of corn, 30,500 of oats, 2,700 of rye, 15,000 of barley, and no flour, during the eight months from August 1 to April 1.

CROP : CONDITIONS.

MISSOURI.—The state report of the condition of wheat is 77, against state report, April 1, of 82, and government report of 86.

INDIAN TERRITORY, VINITA, CHEROKEE NATION, April 26.—The crops are not looking as good as last year at this time. J. S. OBORN.

COLORADO, EVANS, WELD Co., April 29.—Crops are in fair condition. The acreage is an average one, and the stocks on hand are small.

IDAHO, LEWISTON, NEZ PERCES Co., April 27.—The growing grains are in average condition. The acreage of wheat and barley is an average one, that of corn, oats and rye small. Small stocks are on hand.

IOWA, ADEL, DALLAS Co., May 11.—Wheat is in good condition, corn fair, oats poor, and rye average. Average stocks of wheat, oats and rye and small stocks of corn are on hand. CARROLL & FARLOW.

WISCONSIN, AKAPEE, KEWAUNEE Co., May 11.—The growing wheat is in good condition. The acreage of wheat, oats, rye and barley is small. The stocks on hand also are small. L. J. CONWAY & SON.

MISSOURI, BELTON, CASS Co., May 11.—The condition of wheat is poor, of corn fair and of oats average. The acreage of wheat is small, of corn large and of oats average. Small stocks of each are on hand.

KANSAS, CHICO, SALINE Co., May 12.—Wheat, oats and rye are in poor condition. The acreage of wheat is an average, corn large, oats average, and rye small. We have small stocks on hand. H. C. GRIDER.

MISSOURI, ALMA, LAFAYETTE Co., May 13.—Corn and oats are in fair and wheat in poor condition. The acreage of each is an average. Small stocks of wheat and oats, and an average stock of corn are on hand. H. H. HIRSTMAN.

KENTUCKY, BONDVILLE, MERCER Co., May 11.—Wheat is in good condition, and corn, oats and rye in average condition. Wheat and corn are average in acreage, oats and rye small. Small stocks are on hand. W. T. ADAMS.

MISSOURI, ALTENBURG, PERRY Co., April 24.—Wheat and oats are in good condition. The acreage of wheat, corn and oats is an average. An average stock of wheat and small stocks of corn and oats are on hand. C. G. MUELLER.

SOUTH DAKOTA, COLUMBIA, BROWN Co., May 11.—Wheat is in good condition, oats average, and barley good. An average acreage of wheat and oats and a large acreage of barley has been sown. Stocks on hand are small. JESSIE BEAN.

WISCONSIN, BUFFALO, ALMA Co., May 11.—Corn is not planted yet. Wheat, oats, rye and barley are in good condition, with an average acreage. Stocks of wheat are large, oats average and rye small. No corn or barley is on hand. WM. HEISE.

TEXAS, BEAVER, WICHITA Co., May 9.—Corn and oats are in good condition, wheat average, and rye and barley fair. The acreage of wheat is large, oats average, and corn, rye and barley small. Small stocks are on hand. D. D. McMILLAN & SON.

TEXAS, ANNA, COLLIN Co., May 8.—Wheat is in poor condition, corn average and oats fair. The acreage of wheat and corn is average, oats small. Small stocks of wheat and average stocks of corn and oats are on hand. GUTHRIE & COPELAND.

INDIANA, AMBOY, MIAMI Co., May 11.—The condition of wheat is average, oats poor and rye fair. The acreage of wheat is an average, oats and rye small. An average stock of wheat, and small stocks of oats, corn and rye on hand. J. F. & J. S. OVERMAN.

MICHIGAN, ALLEGAN, ALLEGAN Co., May 11.—Wheat, corn and oats are in good condition, rye is good, and barley fair. The acreage is an average, except barley, which is small. Average stocks of wheat and small stocks of other grains are on hand. E. T. CRON.

MISSOURI, BERGER, FRANKLIN Co., May 12.—Wheat and rye are in good condition, corn poor and oats average. The wheat acreage is large, corn acreage average and oats and rye acreage small. An average stock of corn and small stocks of wheat, oats and rye are on hand. J. W. KEMPER.

TENNESSEE, BELL, BUCKLE, BEDFORD Co., May 11.—In condition wheat and corn are fair, oats, rye and barley poor. In acreage wheat and corn are average, oats, rye and barley are small. On hand there is a large stock of wheat and small stocks of other grains. CROUCH, WHITAKER & Co.

KANSAS.—The Kansas state report for April says: Total area sown to wheat in the state last fall, 3,914,753 acres; total area lost, 40 per cent., or 1,576,450 acres; condition of balance of area in the state (2,327,002 acres), which our correspondents believed on the last day of April, would be worth harvesting, 63 per cent., being equivalent to a condition for the en-

tire area sown to wheat in the state of 38 per cent. Spring wheat area reported in the state, compared with that of a year ago, 85 per cent. Condition for the state, 63 per cent.

WISCONSIN, NEW HOLSTEIN, CALUMET Co., April 26.—The temperature for these last two weeks has been below the normal, in consequence of which all spring work is practically at a standstill. Plant life has also suffered to some extent, and will require much sunshine to recuperate. H. H. GREVE.

PENNSYLVANIA, AMBLER, MONTGOMERY Co., May 11.—Wheat is in good condition and rye in average condition. Corn is just being planted. Scarcely any oats have been sown, so late is the spring. The wheat and corn acreage is an average, the oats and rye acreage small. Small stocks are on hand.

NEBRASKA, ALBION, BOONE Co., May 11.—Wheat, oats, rye and barley are in good condition, corn is in average condition. The acreage of wheat, corn and oats is large, of rye average, and barley small. Average stocks of wheat and corn and small stocks of oats, rye and barley are on hand. J. D. BREWER.

IOWA, AFTON, UNION Co., May 12.—The growing wheat and oats are in good condition. The acreage of wheat and rye is very small and no barley is raised. The acreage of corn and oats is an average, but very little corn has been planted. Stock of wheat and corn are small; of oats, average. F. S. VAN PATEN.

SOUTH DAKOTA, GARY, DEUEL Co., May 11.—The growing wheat is in average condition, oats and barley good, and rye poor. The wheat acreage is an average, corn small, oats large, rye small, and barley large. Average stocks of wheat and barley and small stocks of corn, oats and rye are on hand. ALBERT ARIN.

OREGON, AURORA, MARION Co., April 24.—Owing to late rain and cold weather spring wheat and oats have not been sown as yet and the probable acreage is unknown. Winter wheat is in good condition. The acreage is: Wheat average, corn small, rye and barley small. Small stocks are on hand. J. D. HURST & SON.

SOUTH DAKOTA, ARMOUR, DOUGLAS Co., May 12.—No corn has been planted yet. Wheat is in average condition, rye good and oats and barley fair. A large stock of wheat and small stocks of corn, oats, rye and barley are on hand. The wheat acreage is large, the oats, rye and barley acreage small. ARMOUR ROLLER MILLS.

GOVERNMENT REPORT ON RYE.—Winter rye, like wheat, has suffered a decline in condition since last month, its average for May 1 being 82.7, against 85.7 for same date in April. The percentage of New York is 97, Pennsylvania 92, Michigan 80, Illinois 72, Kansas 50. The conditions have been favorable to germination and growth in the Eastern states, but have been the reverse in the Western and Northwestern.

MINNESOTA, AIRLIE, PIPE STONE Co., May 11.—Small grain is looking as well as could be expected at this season of the year. As a large acreage was broken up last season there will be that much more to put in small grain. The land is in excellent condition for the growing crops. The acreage of wheat and oats is an average one, with small stocks on hand. The barley acreage is large with an average stock on hand. WALTER PARKS.

GOVERNMENT REPORT ON BARLEY.—The average condition of barley is 88.6, against 92.8 last year. In the states of principal production the averages are: New York, 95; Ohio, 94, and California, 87. The lowest conditions are in Illinois, Missouri, Kansas, Nebraska and Colorado. In California the crop has been damaged by overflows and wet weather. The proportion of spring plowing done, May 1, is reported as 73.4 per cent., against an average of 77 per cent. for a series of years.

GOVERNMENT REPORT ON WHEAT.—The May returns of the Department of Agriculture on the condition of winter wheat show a reduction of 2.1 points from the April average, being 75.3, against 77.4 last month, and 84 in May, 1892. The averages of the principal winter wheat states are: Ohio 88, Michigan 71, Indiana 79, Illinois 62, Missouri 72, Kansas 51. The average of these six states is 68.3, against 74.2 in April, being a decline of 5.9 points since the first of last month. It is 88 in New York and Pennsylvania, against 87 and 88 respectively last month; 97 in Maryland and 85 in Virginia. In the Southern states the averages range from 74 in Texas to 96 in North Carolina. The conditions have been favorable to the growth and development of wheat in the New England, Southern and Pacific states. In California the condition has advanced 10 points, while in the principal wheat producing states there has been considerable deterioration. In Kansas, Colorado and Nebraska, where planting was backward and germination slow, owing to the continued drouth and much of the plant being winter killed, large areas have been plowed up and devoted to other crops. The same has been done in Missouri, Indiana and Illinois, where the plant was badly winter killed and greatly damaged since by the continued wet weather. In Michigan the severity of the winter greatly damaged the plant and the weather since has been too cold and backward to admit of re-

cuperation. Damage from the Hessian fly in some of the counties of the states of Indiana and Ohio is reported, and from the chinch bug in Kansas. In some of the principal wheat states the plant on the uplands is reported in good condition, while on low and undrained lands the conditions are poor and much of the crop destroyed by drowning.

ILLINOIS.—In the northern division of the state the area destroyed by winter killing or floods is 8 per cent. larger than was reported April 1, or 30 per cent. of the area seeded, 105,000 acres, which leaves 73,000 acres for harvest. The most unfavorable reports come from Central Illinois, where nearly half the acre (49 per cent.) is destroyed, leaving but 356,000 acres for harvest, out of an area seeded of 706,000 acres. While Southern Illinois has not suffered so much as other portions of the state, the yield in this section will be materially lessened, 18 per cent. of the area seeded being reported destroyed, or 5 per cent. more than was reported on April 1. The condition of the growing plant in Northern Illinois is given as 72 per cent. of an average, 61 per cent. in the central division and 83 per cent. in Southern Illinois, the state average being 70 per cent. It is exceedingly difficult to obtain even an approximately correct idea of the condition of wheat at this date on account of large area destroyed, or which will be plowed up later for corn, it not being worth harvesting, and in some sections the fields in bottom lands are now under water and farmers cannot tell what the outcome of such pieces will be.



Memberships in the Minneapolis Chamber of Commerce are selling at \$375 to \$380.

Certificates of membership in the New York Produce Exchange are selling at \$675.

All the exchanges have adopted rules to close on Saturdays at 12 o'clock until October 31.

The Chicago Board of Trade has appointed a reception committee to wait upon visitors during the World's Fair season.

We are indebted to William Thurstone, secretary of the Buffalo Merchants' Exchange, for a copy of his annual report for 1892.

Secretary Geo. F. Stone of the Chicago Board of Trade has just issued his thirty-fifth annual report. It surpasses all previous reports in extent and arrangement.

A congress of Boards of Trade will convene at Chicago during the week commencing June 19, under the management of the World's Congress Auxiliary of the World's Columbian Exposition.

The Kansas City Commercial Exchange has amended its rules so as to provide for dealing in futures. On the first day about 75,000 bushels of No. 2 hard winter wheat was sold for July delivery.

The thirty-fourth annual report of the Toledo Produce Exchange has just been issued. In the report Denison B. Smith, secretary, gives a large amount of information of value to members of the grain trade.

The report that there has been a decadence in business matters centering in the Cincinnati Chamber of Commerce is explained away by the *Price Current*, which says the decline has been only in speculation in provisions and is more than offset by the increase in other lines of business.

The Philadelphia Commercial Exchange elected officers recently as follows: President, V. P. McCulley; treasurer, John E. Daley, and managers, John H. Michener, William A. Dufur, Joseph Bosler, J. W. Supplee, Walter F. Hagar, Lincoln K. Passmore, Frank L. Neall and William W. Steel.

The Superior Board of Trade has practically suspended business. On May 2 the directors of the Board took adverse action on the petitions to request the Governor to order Minnesota grain inspectors and weighers out of the state of Wisconsin. Hence Minnesota inspection will be continued in West Superior, at least until the directors hold their next meeting on August 1. The board has so far been unable to secure the passage of a state grain inspection law, as neither the farmers nor the grain dealers offered them any aid.

Grain dealers visiting Chicago during the World's Fair should not fail to call at the office of the AMERICAN ELEVATOR AND GRAIN TRADE, Room 5, 181 Dearborn street, and get a copy of our souvenir guide to the World's Columbian Exposition. A register has been provided where visiting grain men may record their home and city address, also the date of departure, to assist friends in the city in finding each other.

WATERWAYS

The Welland Canal was opened April 21.

The steamer Parnell on its first trip to Buffalo this season had 3,100 bushels of corn wet.

Two boat loads of corn, the first of the season, arrived at Chicago April 22 by canal from Lockport.

At midnight, April 14, the first boats of the Chicago grain fleet got under way for the trip to the lower lakes.

The steamer Newell Eddy, with 81,000 bushels of corn from Chicago for the lower lakes, was lost in the recent storm.

On arrival at Buffalo portions of the grain cargoes of the G. W. Morley, Red Wing and Olive Jeannette were found to be wet.

The barge Shawnee while anchored in Chicago harbor dragged its anchors in a storm recently and damaged half the corn cargo.

Kingston, Ont., has been blockaded by the grain receipts by lake from the West. Ice in the St. Lawrence River prevented shipments out.

Navigation recently opened on the upper Missouri River. The steamer Alsop arrived at Grand Forks, N. D., May 6, with a quantity of wheat.

Just as the elevators at Buffalo had become filled with the grain arriving by lake the Erie Canal was opened and all danger of a blockade averted.

The largest cargo ever carried through the Welland Canal was 57,000 bushels of corn recently shipped in the steamer John Duncan from Chicago to Kingston.

The new steel steamer Selwyn Eddy carried 150,000 bushels of wheat as its first cargo this spring. The great lakes are rapidly reaching the ocean standard.

E. R. Field, of the Standard Grain Company of Kansas City, Mo., says that the merchants of Kansas City will inaugurate a barge line to New Orleans for export grain.

Vesselmen will tie up their boats the remainder of the month of May, it is said, on account of low freights on the lakes. A similar proposition was made early last season, but nothing came of it.

The Standard Grain Company of Kansas City, Mo., recently made another heavy shipment of wheat from Kansas City to Cuba by way of the Missouri River. The consignment consisted of 25 cars of wheat.

Only seven American vessels had a share in the grain export trade of New York last year. These seven carried 375,607 bushels out of a total of 73,396,828, showing how insignificant is America's shipping on the ocean.

Grain cargoes from Cleveland for Buffalo have been short in many cases recently. The Sauber was 182 bushels short, the Wade 115, the St. Paul 9, and the schooner Grover 7. It is not usual for winter cargoes to be short.

Navigation at Montreal opened May 3 with the arrival of the first ocean steamship Pickhuben from Hamburg, Germany. Fifteen steamers which had been delayed below by the ice in the St. Lawrence River above Quebec arrived later.

The Erie Canal was opened in its western division May 3, and in the middle and eastern divisions May 5. Seventy boats left Buffalo loaded the first day. The rates were: Wheat 5 cents, corn 4½ cents, and flaxseed 4½ cents per bushel to New York.

The Canadian Government has refused to make a grant to the promoters of the canal to connect Lake Erie with Lake St. Clair to cover the cost of a preliminary survey. The proposed route is in Canadian territory and would shorten the route about fifty miles.

New Yorkers are said to be promoting a grand ship canal between their city and the West, which is to shorten the distance between Chicago and New York 400 miles. Fifty million dollars are to be invested. It is very improbable that this scheme will be carried out, except on paper.

Believing that the canal boatmen can rent, buy or build an elevator of their own at Buffalo, N. Y., the people of that city are not assisting them in their endeavor to have state elevator built. It is claimed that the boatmen have a free field, and that by building elevators and contracting to load grain before its arrival at Buffalo they will be enabled to secure all the business to which the canal is entitled.

The recent break in the Cornwall Canal as soon as the water was let in is another proof of the sad want of efficiency on the part of the officials of the canal; but how can it be otherwise when the appointments of superintendents and engineers are made more with the view of satisfying political patronage than supplying competent men who thoroughly understand their duties? These repeated breaks in the Cornwall

Canal are simply a disgrace to our canal system, and are diverting millions of bushels to the Erie route.—*Trade Bulletin, Montreal.*

The schooner F. L. Danforth was caught by the recent storm when leaving Chicago with 30,000 bushels of corn. The boat was driven ashore and sprung a leak. On May 3 the vessel was released and towed to the "Minnesota Elevator" at Chicago, where the wet corn was unloaded and placed in the driers.

A steamboat line has agreed with the farmers of Walworth and Campbell counties, S. D., to transport their wheat down the Missouri River to Pierre, whence it will be shipped east over the C. & N. W. Ry. Heretofore the farmers have been compelled to haul their grain 50 to 75 miles to the railroad.

The first boat to pass through the Straits of Mackinaw this season was the steamer Philip D. Armour, which passed Mackinac at 7 A. M., April 17. The Armour, which is named after Chicago's well-known elevator man, had a cargo of grain aboard. Floating ice made the passage full of peril.

It is proposed to improve the Minnesota River and Red River of the North so as to render them navigable to boats. The farmers of the Red River valley in Western Minnesota and Eastern Dakota will then have the advantage of cheap water transportation to St. Paul and Minneapolis on the Mississippi River, enhancing the value of their grain several cents per bushel and the value of their lands several dollars per acre.

The carrying trade of the United States resembles that of no other country. Although many of its large cities are on the Atlantic and Pacific coasts the internal commerce is greater than the foreign commerce. In 1892 the imports and exports by all ports were less than ten million tons. In the same year the railroads moved over seven hundred million tons. The export freight movement is thus less than 2 per cent. of the domestic freight movement. The water tonnage and foreign freight movement in other countries forms a far greater proportion of the total commerce of the country.



Edwin McMannus has resigned his position as state weighmaster at Duluth, Minn.

J. G. McGrew of Crookston has been appointed state weighmaster at Duluth, Minn.

Robert McLean of Eckhout & McLean, dealers in grain and lumber at Baltimore, Md., was recently married to Miss Rebecca Stewart.

C. H. Graves, the elevator man of Duluth, has been appointed one of the commission to erect the magnificent Minnesota State Capitol at St. Paul, which is to cost \$2,500,000.

A. G. Chambers, manager of the North Dakota Elevator company, Minneapolis, Minn., has taken a vacation for the benefit of his health which has not been of the best for some time.

George Green has resigned the position of grain buyer at Burchard, Minn., to accept a position as superintendent of the agricultural department in the Indian school at Pipestone.

William Frick, who has for thirteen years resided at Brookings, S. D., in the employ of the Van Dusen Elevator Company, has moved to West Superior, Wis., to take a position in the new "Belt Line Elevator."

OUR CARD BASKET

We have received calls from the following gentlemen prominently connected with the grain and elevator interests, during the month:

H. M. Taggart, Rutland, Ill.
Mark N. Tisdale, Wenona, Ill.
B. Irwin, of Oakes & Irwin, Decatur, Ill.
Alexander L. Linell, St. Petersburg, Russia.
J. Silas Leas of the Barnard & Leas Manufacturing Company, Moline, Ill.
H. Hamper, Greenville, Mich., representing S. Howes, Silver Creek, N. Y.
J. F. Payne, Indianapolis, representing Barnard & Leas Manufacturing Company, Moline, Ill.

Corn, amounting to 69 bushels, was imported in March, against 76 bushels in March, 1892; and during the nine months ending with March 1,702 bushels was imported, against 15,177 bushels during the corresponding period of 1891-2. No corn was re-exported during the nine months ending with March, against 9,731 bushels during the corresponding period of 1891-2.

Latest Decisions.

Shipment for Future Delivery.

A shipment from a distant state, made so as to reach the pier of a common carrier in New York between 4 and 5 o'clock in the afternoon of the last day of October is in time for "October delivery" at that place.—*Cochran Cotton Seed Oil Co. vs. Haebler, Court of Common Pleas of New York City, Feb. 6, 1893, 21 N. Y. Sup. 945.*

Who May Maintain Lien for Threshing Grain.

In order to preserve a lien for threshing grain, the statement that must be filed must contain a description of the land whereon the grain upon which the lien is claimed is grown. No party is entitled to a lien unless he owns and operates the machine with which the threshing is done.—*Parker vs. First Nat. Bank of Lisbon, Supreme Court of N. Dak., Dec. 14, 1892, 54 N. W. Rep. 313.*

Acceptance of Goods.

Where one takes goods consigned to him out of the possession of the carrier and has them hauled to his own place of business, and afterward sends his check to the consignor for other goods purchased by him without any reference to the goods so taken possession of by him, he is liable for their price, though he may not have ordered them.—*Indiana Mfg. Co. vs. Hayes, Supreme Court of Pennsylvania, Feb. 20, 1893, 26 At. Rep. 6.*

Damages for Delay in Forwarding Baggage.

The measure of a passenger's damages for a carrier's delay in forwarding his trunk is the value of the property during the delay.—*Gulf C. & S. F. Ry. Co. vs. Vancil, Court of Civil Appeals of Texas, Feb. 8, 1893, 21 S. W. Rep. 303.*

If the courts will grant damages for delay of baggage, they will surely grant damages for delay of grain in transit or at point of shipment. The loss of interest on the money invested in the grain is often large, not to mention the loss by decline in the market price.

Liability of Carriers as Warehousemen.

The Supreme Court of North Carolina has decided that a carrier which has furnished a shipper with a car which the latter has loaded with merchandise is liable only as a warehouseman, until notified of the readiness of the car for transportation and of the name of the consignee; and hence it is not liable as an insurer for the destruction of the cargo by fire while the car was standing on the track before it was so notified. The fact that the carrier permitted the car, after it was loaded, to stand near a dry kiln in which the fire originated, is not such negligence as will render it liable as a warehouseman, since it was merely a gratuitous bailee, and the destruction of the car was not the natural and proximate consequence of the act complained of.

Action Against Carrier for Injury to Stock.

Where a shipper of stock agreed with the railroad company that, as a condition precedent to recovery for injury to the stock, he should give notice in writing of his claim therefor to some officer of the company, or its nearest station agent, before the stock was removed from the place of delivery and mingled with other stock. By a delay in transit the stock was damaged, but the shipper did not know the amount of his loss until his return home, and after deducting his selling weights from his shipping weights. After ascertaining the loss, and two weeks after the shipment, he notified the company thereof by letter. There was evidence for the jury of a reasonable compliance by the shipper with the conditions of the contract.—*Louisville, N.-A. & C. Ry. Co. vs. Steele, Appellate Court of Indiana, Feb. 2, 1893, 33 N. E. Rep. 236.*

Rights of Tenant Where Premises are Damaged by Fire.

A lease provides that if the building is damaged by fire without fault of the lessee, he shall only pay for such portion of the demised premises as he can reasonably occupy during the time required to make the necessary repairs; but if the building be so damaged as to require rebuilding, the lease shall end and the rent shall be paid up to such time. Where, under such a lease, a building was so damaged by fire, without fault of the lessee, as to render it untenable, but did not require rebuilding, the fire terminated the lease, under the statute which provides that the lessee of any building which shall be so injured by the elements as to be untenable shall not be liable to pay rent therefor, after such injury, unless otherwise provided by written agreement.—*N. Y. Real Estate & Bldg. Imp. Co. vs. Motley, City Court of N. Y., 21 N. Y. Sup. 947, Nov. 25, 1892.*

"That elevator has a pabe in its leg," said a wag, as he pointed to a window in an unusual place in an elevator. "Yes," said a shoveler, "and its leg is inclined to room-attics, too."

LATE PATENTS

Issued on April 11, 1893.

GRAIN METER.—Daniel Wilde, Washington, Ia. (No model.) No. 495,145. Serial No. 454,004. Filed Dec. 3, 1892.

HORSE POWER.—Harry Bitner, Chicago, Ill., assignor to Andrew Wickey and Edward W. Wickey, same place. (No model.) No. 495,009. Serial No. 438,743. Filed July 2, 1892.

VALVE GEAR FOR GAS OR PETROLEUM MOTOR ENGINES.—Hermann Schumm, Cologne-Deutz, Germany, assignor to the Gas-Motoren-Fabrik-Deutz, same place. (No model.) No. 495,376. Serial No. 443,249. Filed Aug. 16, 1892.

Issued on April 18, 1893.

DEVICE FOR MIXING GRAIN.—Frank Kaucher, St. Joseph, Mo. (No model.) No. 495,590. Serial No. 438,718. Filed July 1, 1892.

COMBINED HULLER AND SCOURER.—Adolph F. Hinz, San Francisco, Cal. (No model.) No. 495,803. Serial No. 456,273. Filed Dec. 24, 1892.

ELEVATOR AND CONVEYOR.—Michael M. Shellabarger, Beaver Falls, Pa. (No model.) No. 495,685. Serial No. 402,670. Filed Aug. 14, 1891.

GRAIN ELEVATOR.—George C. Flagg and Edward T. Ghymon, Lewistown, Ill. (No model.) No. 495,698. Serial No. 443,260. Filed Aug. 16, 1892.

HAY PRESS.—Charles D. McNeill and Francis E. Huck, Victoria, Tex.; said McNeill assignor to said Huck. (No model.) No. 495,826. Serial No. 348,788. Filed April 21, 1890.

BALING PRESS.—Milton B. Jones, Meridian, Miss., assignor to Charles J. Hyde, same place. (No model.) No. 495,589. Serial No. 447,427. Filed Sept. 30, 1892.

RECORDING SCALE.—Robert McFarlane, Minneapolis, Minn., assignor of one-half to Waldo E. Holmes, same place. (No model.) No. 495,752. Serial No. 442,606. Filed Aug. 9, 1892.

RECORDING WEIGHING SCALE.—Robert McFarlane, Minneapolis, Minn., assignor of one-half to Waldo E. Holmes, same place. (No model.) No. 495,751. Serial No. 442,605. Filed Aug. 9, 1892.

BALING PRESS.—Winfield S. Livengood, Walter H. Chadbourne and James M. Gibbons, Kansas City, Mo., assignors, by mesne assignments, to James E. Knight and Edward Kelly, same place, and William A. Alderson, Westport, Mo. (No model.) No. 495,944. Serial No. 439,907. Filed July 13, 1892.

Issued on April 25, 1893.

MACHINE FOR SHELLING PEAS.—Navarre Placide, Paris, France, assignor to Alphonse Biardot, New York, N. Y. (No model.) No. 496,206. Serial No. 420,225. Filed Feb. 3, 1892. Patented in France Aug. 23, 1889, No. 200,354.

MALTING MACHINERY.—Hubert C. Baker, Hartford, Conn., and John W. Free, New York, N. Y., assignors to the American Malt Manufacturing Company of Virginia. (No model.) No. 496,335. Serial No. 408,742. Filed Oct. 15, 1891.

Issued on May 2, 1893.

ROTATING GRAIN METER.—Edward Gilford, Cowles, Neb. (No model.) No. 496,406. Serial No. 439,078. Filed July 5, 1892.

BALING PRESS.—Charles B. Selover, Owasco, N. Y. (No model.) No. 496,669. Serial No. 437,238. Filed June 20, 1892.

BINDING ATTACHMENT FOR BALING PRESSES.—Andrew Wickey, Quincy, Ill. (No model.) No. 496,628. Serial No. 308,021. Filed April 20, 1889.

HAY PRESS.—Joseph F. Thompson, Richard L. Murphree and William D. Harrison, Salado, Tex. (No model.) No. 496,457. Serial No. 452,531. Filed Nov. 19, 1892.

Issued on May 9, 1893.

GRAIN CAR DOOR.—Peter J. Monaghan and Herman Mohaupt, Chicago, Ill.; said Mohaupt assignor to said Monaghan. (No model.) No. 497,193. Serial No. 432,908. Filed May 13, 1892.

APPARATUS FOR DRYING BREWERS' GRAINS.—Charles H. Koyl, Brooklyn, N. Y., assignor to the National Drying Co., Phillipsburg, N. J. (No model.) No. 497,280. Serial No. 458,150. Filed Jan. 12, 1893.

APPARATUS FOR DRYING BREWERS' GRAINS, ETC.—William H. Butler, Waldwick, assignor to himself, and Albert Pflugh and Philip Stewerwald, Hoboken, N. J. (No model.) No. 496,852. Serial No. 424,124. Filed March 8, 1892.

BALING PRESS.—Andrew Wickey, Chicago, Ill. (No model.) No. 497,039. Serial No. 443,810. Filed Aug. 22, 1892.

BALING PRESS.—Lucy A. Corning, Rockford, Ill. (No model.) No. 497,090. Serial No. 419,016. Filed Jan. 23, 1892.

BALING PRESS.—Lucy A. Corning, Rockford, Ill. (No model.) No. 497,091. Serial No. 443,666. Filed Aug. 20, 1892.

PRESS COMMENT.

PLUNGER AND PHILANTHROPIST.

"Plunger Pardridge" of Chicago, Ill., is getting a good deal of the opposite of fun out of his May wheat deal. He must be immensely gratified when he observes the very general contentment which pervades the community every time he gets a new "pinch," or a new "nobble," and lays down his dollars by the thousands on his deal. He has made the speculative fraternity so happy that he really deserves the name of philanthropist, as well as plunger.—*Milling World, Buffalo.*

REMEDY IN THEIR OWN HANDS.

Minnesota, too, is wrestling with the state elevator problem. The legislature has passed a bill providing for the erection of a farmers' elevator at Duluth to cost \$200,000. The situation in Minnesota is much worse than on the Erie Canal. The railroad companies severely oppress the grain raisers in the Northwest, and yet the latter, like the canal men in New York state, have the remedy in their own hands. They are rich enough, by combining, to build elevators of their own.—*Buffalo Express.*

WEIGHING GRAIN AT MONTREAL.

It is about time that our shippers took some steps to protect themselves. The appointment of sworn weighers should be insisted upon, or rather the elevating company should recognize the importance of employing only weighers who are sworn and found fit for their positions of trust, by a competent and impartial body of men. It is to be hoped that the company will after all give some assurances to shippers here and in the West, before entering upon another season, that they are willing to grant the reforms asked for, both as regards sworn weighers and a better system of working the automatic checkers.—*Montreal Trade Bulletin.*

PRIVATE OWNERSHIP OF CARS.

The private ownership of railway cars seems to be a mistake, and one that might easily grow into a serious evil. It is the business of the railway companies to provide transportation facilities, and it does not seem wise to attempt to shift this responsibility to the shippers, who are now put to sufficient trouble to get their merchandise handled as it ought to be. Nothing would be gained beyond the addition of a few hundred cars to the available supply, and these would be so distributed that a few large concerns would profit by their use, at the expense of the majority of small shippers whom the railroads would neglect even more than they do now. The latter are under a legal obligation to provide accommodations adequate to the handling of the business offered them, and this obligation they should be compelled to fulfill.—*Hardwood.*

RECIPROCAL CHARGE FOR DELAY.

One of the subjects touched upon by the railroad commissioners' convention was that of demurrage or car service charges, which of late have been of such universal application throughout the country; and while it was admitted that such a charge was altogether correct and contributed as much if not more to the benefit of the shipper as to the railway, it was also suggested that a reciprocal charge for the detention of freight by the railroad should be instituted. Some of the members were unable to perceive any equity in a proposition which on the one hand required payment for the detention of a car by a shipper beyond a reasonable time for loading or unloading, and did not, on the other hand, enforce a penalty for the detention or delay of freight by the railroads beyond a reasonable time required for its transportation. It cannot be denied that there is considerable ground for complaint in this direction, and it is altogether possible that the wise course for railroads is to recognize this reciprocal obligation by defining the limits of time within which transportation service shall be deemed reasonable, and voluntarily pay a penalty for detention above such period. Otherwise it may be found that like many other cases the people will take the matter into their own hands and out of ignorance, prejudice and selfishness combined prescribe such limits as will constitute an absolute hardship upon the railways.—*Railway Review.*

OBITUARY

J. C. Lincoln, grain dealer and storekeeper at Salem, Neb., is dead.

Daniel E. Day, dealer in grain and flour at Providence, R. I., is dead.

Neil Stewart of Neil Stewart & Son, grain dealers and bankers at Livonia Station, N. Y., is dead.

William E. Barry, once a grain dealer and member of the Baltimore Corn and Flour Exchange, is dead.

Alfred C. Thomas, who for many years has been engaged in the grain trade at Chicago, died April 25.

J. N. Harlan, dealer in grain and stock at Eureka, Ill., died April 16, aged 67 years. He was well known to the trade.

Thomas B. Rice, an old member of the Chicago Board of Trade, who was prominently identified with the grain trade, died April 23.

THE MARKETS.

We will be pleased to publish under this head short reviews of the conditions ruling in the different markets. Copy must reach us by the morning of the 14th of each month.

The average daily consumption of hay in Chicago is 500 to 600 tons, but M. M. Freeman & Co. advise us that, in consequence of the "World's Fair" conditions, the demands are largely increased and we may look for a continued good market.

HAY AT CHICAGO.—M. M. Freeman & Co. report receipts at 1,280 tons and shipments at 131 tons for the week ending May 10. TIMOTHY.—Arrivals of all grades are light and which meet ready sale at good prices. No. 1, \$12½@13½; No. 2, \$11@12; Mixed, \$10@11. PRAIRIE.—All grades of choice hay in active request. Market steady, with moderate receipts. Choice Kansas Upland, \$11½@12½; Choice Iowa Upland, \$11@12; Good Iowa and Kansas Upland, \$9½@11; Good Feeding Hay, \$7@9. STRAW.—Much wanted, as offerings are very light. Rye, \$12; Oat and Wheat, \$7@8. Shippers are advised to avail themselves of the favorable market, for the time to ship is when the average shipper cannot, and which is the present condition. Now is the time, between bad weather, bad roads, farm work and other duties, the usual shipping is prevented.

B. & O.'S NEW THROUGH LINE.

PREPARING FOR THE IMMENSE TRAFFIC INCIDENT TO THE WORLD'S FAIR.

The management of the Baltimore & Ohio Railroad is preparing for an immense business in 1893, while the World's Fair is open in Chicago. The terminals at Chicago are capable of accommodating a much heavier traffic than is now being done, and important changes are being arranged for the handling of very heavy freight and passenger business to the West from New York, Philadelphia and Baltimore. New equipment for largely increased passenger business and an extensive stock of freight cars have been ordered. The various roads of the system will be improved by straightened lines, reduced grades, extra side tracks and interlocking switches. The new line between Chicago Junction and Akron has shortened the distance between Chicago and tidewater twenty-five miles, and between Pittsburg and Chicago fifty-eight miles.

The distance between Chicago and Pittsburg and Chicago and Cleveland by the construction of the Akron line and the acquisition of the Pittsburg & Western line and the Valley Railroad of Ohio is about the same as via the Lake Shore from Cleveland to Chicago, and by the Pennsylvania from Pittsburg to Chicago. The alignment is to be changed and grades reduced to a maximum of twenty-six feet. It is expected that within twelve months the old Baltimore & Ohio through line between Chicago and the Atlantic Ocean will have passed away and the new line via Pittsburg be established, with no greater grades or curvature than on any of the trunk lines.

Work has already begun east of Pittsburg to meet improvements making west of Pittsburg. These improvements will consist of additional second and third tracks, a general correction of the alignment and completion of the double track on the Metropolitan Branch. It is expected that the new through line will be ready simultaneously with the completion of the Belt Line through the city of Baltimore, which is intended to unite the Washington branch with the Philadelphia division and do away with the present line via Locust Point. Forty new and powerful locomotive engines were added to the equipment during the last two months, and others are in process of construction. The permanent improvements now under way and in contemplation involve the expenditure of some \$5,000,000.—*Baltimore American.*

Maryland has sent a cereal exhibit to the World's Columbian Exposition at Chicago. Each product has the name of the grower attached. Some excellent wheat is to be seen.

IMPORTS OF RICE.

Our imports of rice, rice flour, meal and broken rice for the month of March aggregated 15,571,206 pounds, against 11,974,374 pounds for March, 1892; and for the nine months ending with March our imports aggregated 107,043,538 pounds, valued at \$1,921,141; against 93,688,955, valued at \$1,752,880, for the corresponding period of 1891-2. In addition we imported in March from the Hawaiian Islands, free of duty, 455,300 pounds of rice, against 463,000 pounds in March, 1892; and in the nine months ending with March 7,781,800 pounds, valued at \$323,324, was imported; against 5,307,600 pounds, valued at \$268,530, in the corresponding period of 1891-2.

During the nine months closing with March we re-exported 55,059 pounds of Hawaiian rice, valued at \$1,536, and 7,344,949 pounds of other foreign rice, valued at \$149,699; compared with 11,150 pounds of Hawaiian, valued at \$484, and 7,954,557 pounds of other foreign rice, valued at \$151,775, during the corresponding period closing with March, 1892.

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POUNDS TO BUSHELS.—These tables which show the number of bushels in any quantity from 20,000 to 70,000 pounds were compiled for the Chicago Grain Inspection Department. They are well printed on good paper and conveniently arranged for quickly finding the number of bushels in a carload. Each book contains ten leaves and each leaf is indexed at margin and printed on one side only. Each book is neatly bound in cloth. They will save clerks much labor and prevent errors in reduction. Price for "OATS," \$1.00; "BARLEY," \$1.00; "CORN AND RYE," \$1.00. The set.....\$2.50

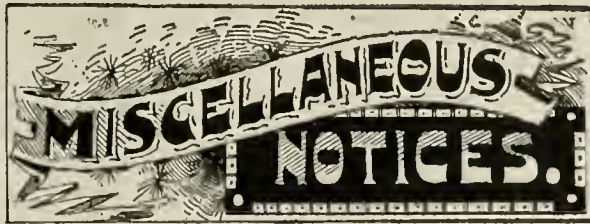
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DAVIS GRAIN TABLES.—These tables give the value of any number of bushels of produce weighing 60 pounds to the bushel from 25 cents to \$1.25 per bushel, and the value of any produce weighing 32, 48 and 56 pounds to the bushel at 15 cents to \$1.50. The book also contains Davis' Dockage Table, which gives the amount to dock any load of wheat up to 600 bushels at 1½ to 5 pounds' dockage. The book contains 219 pages of tables, printed on good paper, with large type, and well bound in cloth. The book is a new publication, and the arrangement of the tables is much more convenient than in some of the old publications. Price.....\$1.25

CLARK'S GRAIN TABLES.—This work is published in several different forms, for use in different lines of business. In these tables pounds are reduced to bushels, so that a buyer can quickly determine the correct number of bushels in a load without doing any figuring. Their use effects a saving every day of more than time enough to pay for them. The edition intended principally for reducing team scale weights to bushels contains nine tables, and is bound in paper. Price 50 cents. This will be found invaluable to country buyers. A new edition, intended for shippers and commission merchants, reduces any quantity up to 64,000 pounds to bushels. It contains 16 tables, and is neatly bound in cloth. Price.....\$1.50

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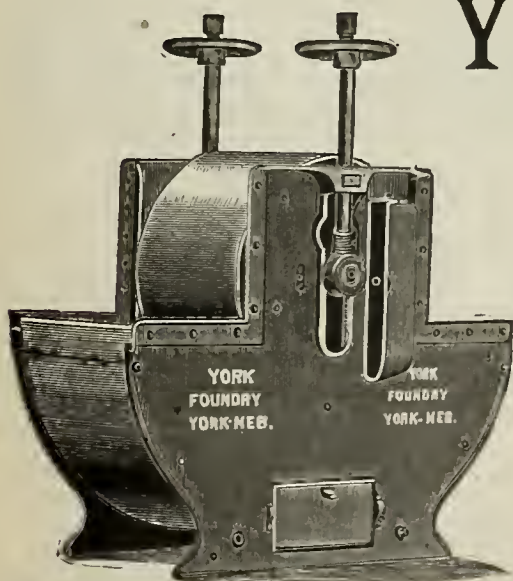
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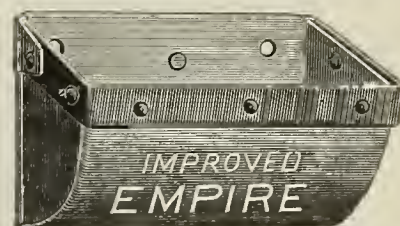
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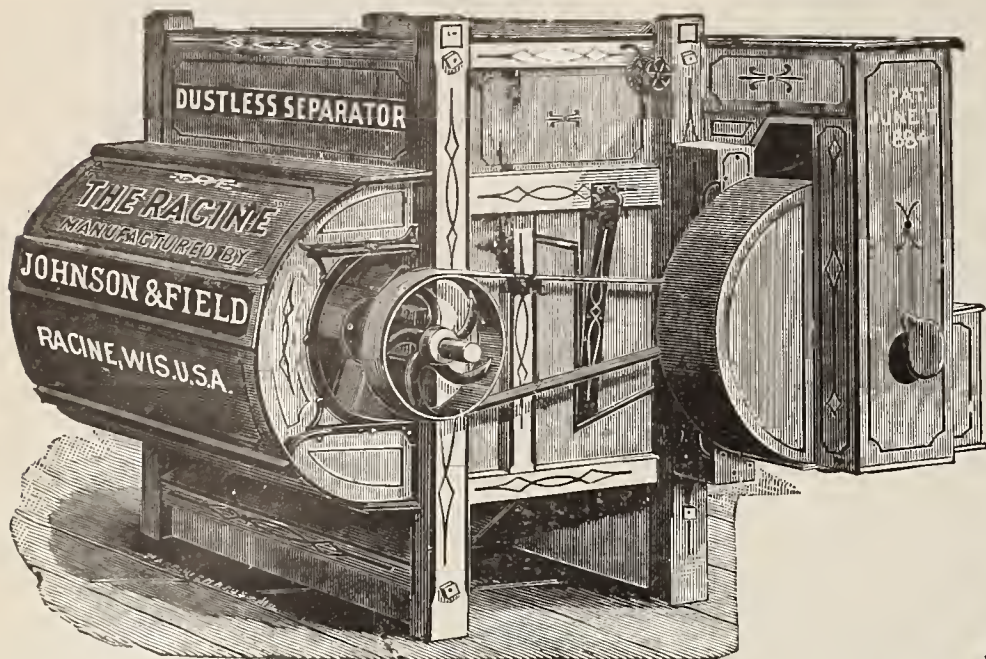
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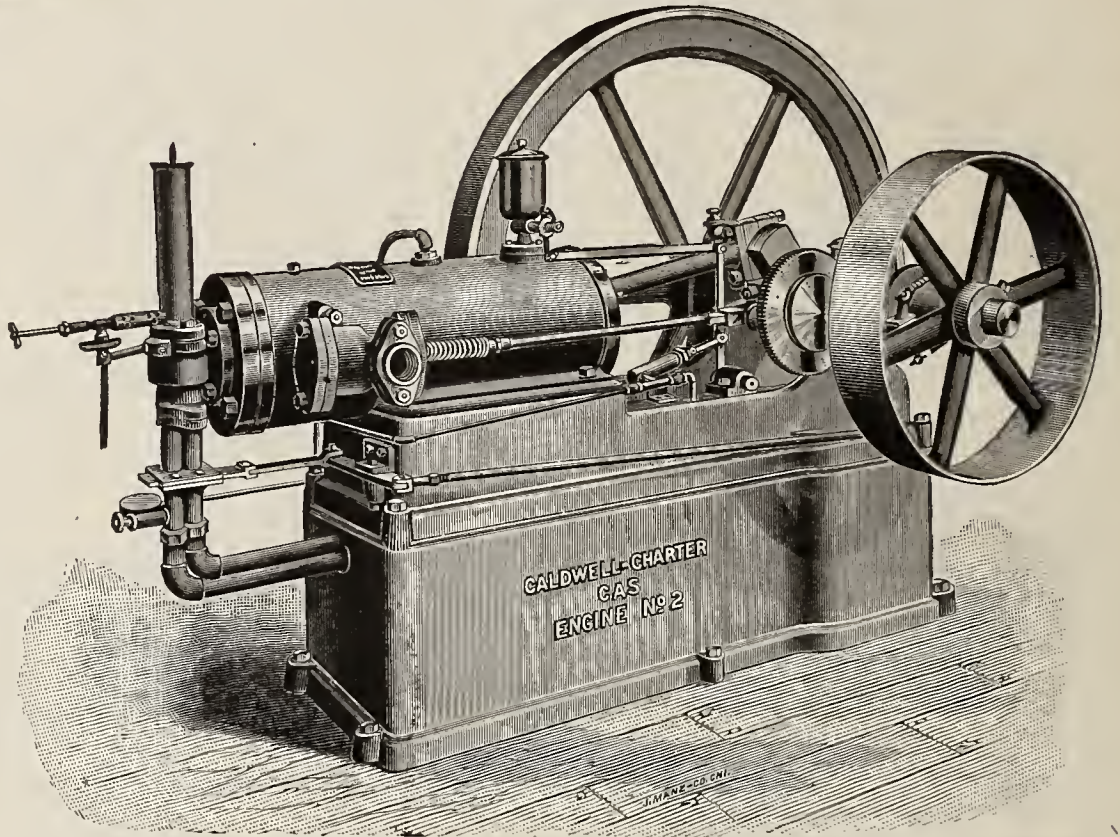


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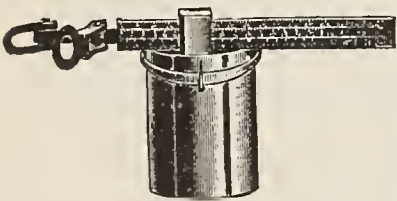


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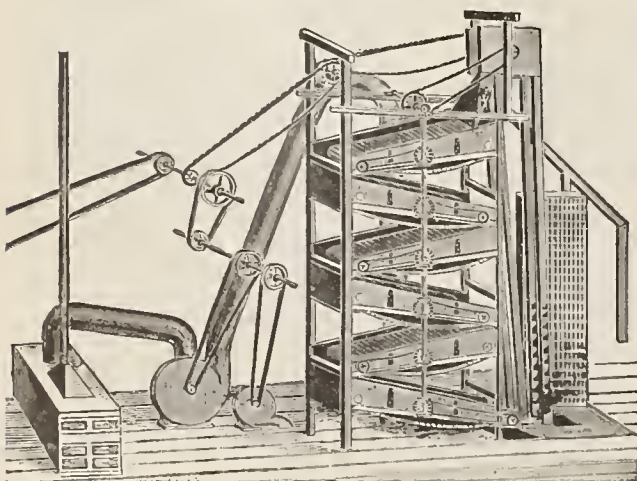
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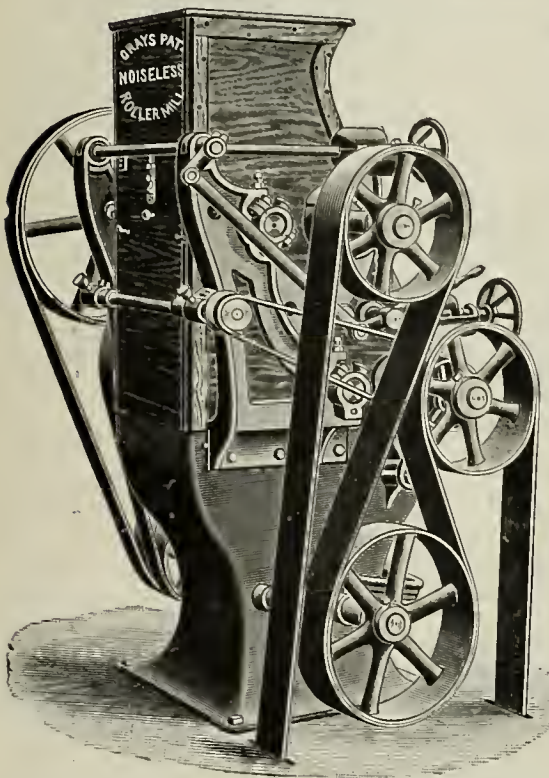
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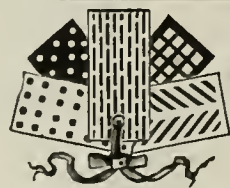
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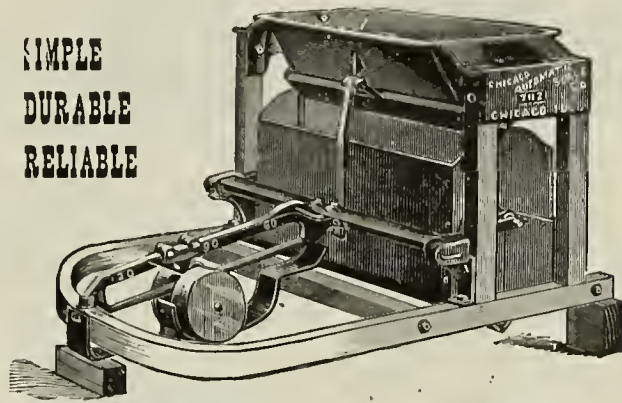
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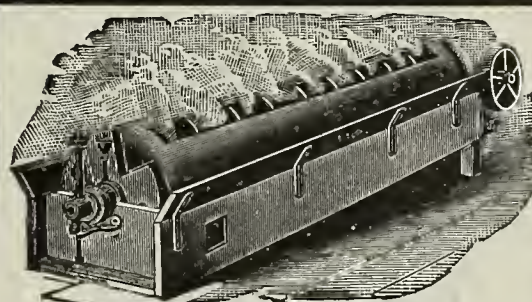
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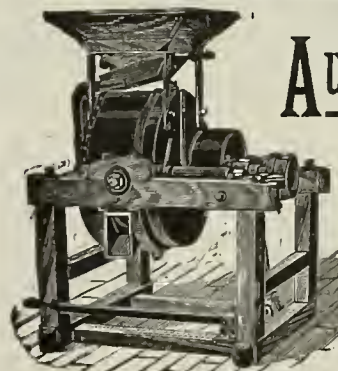


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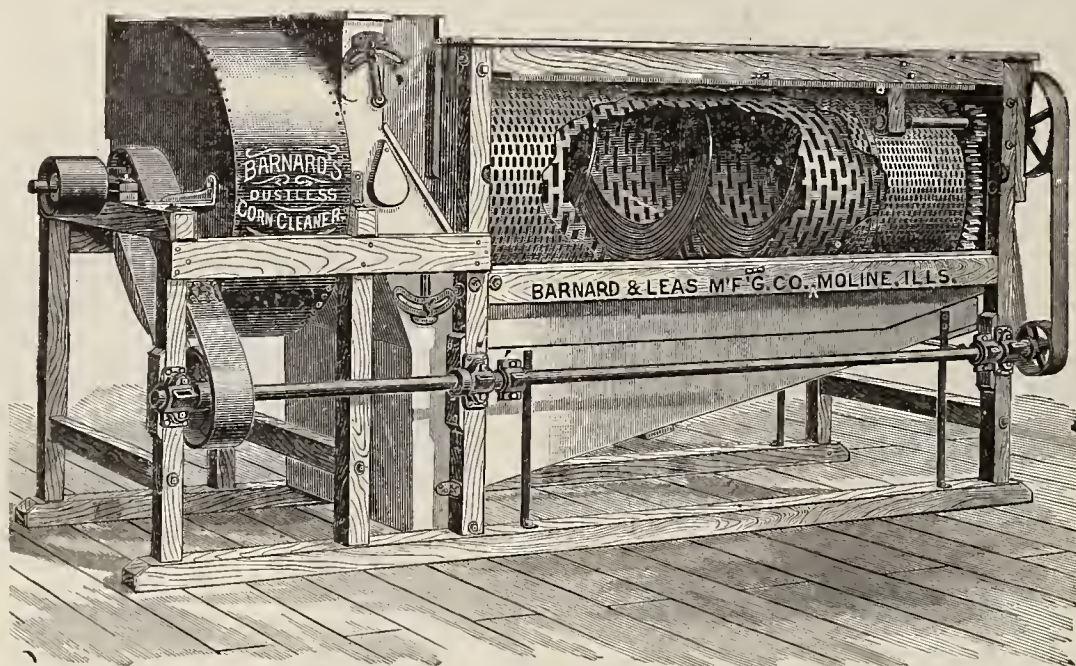
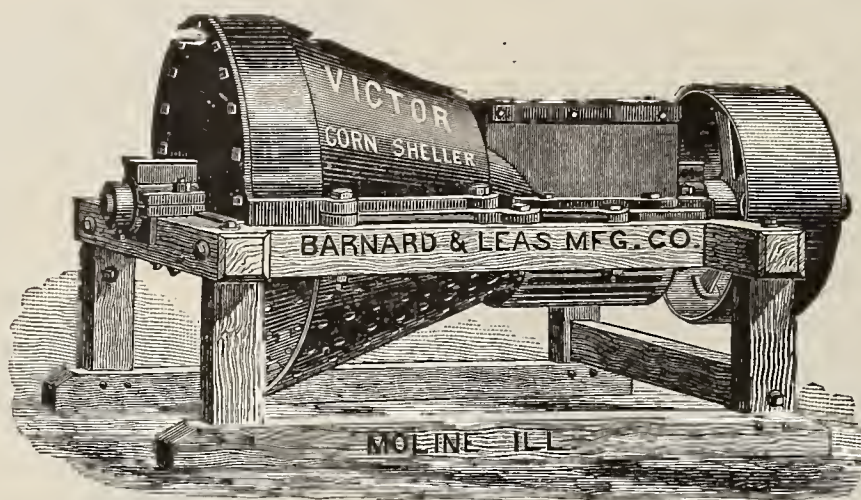
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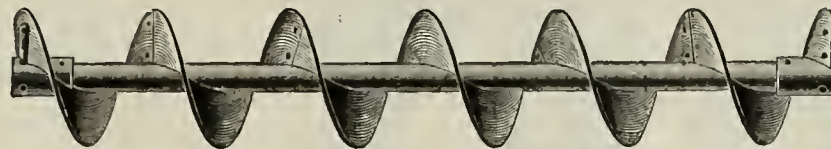
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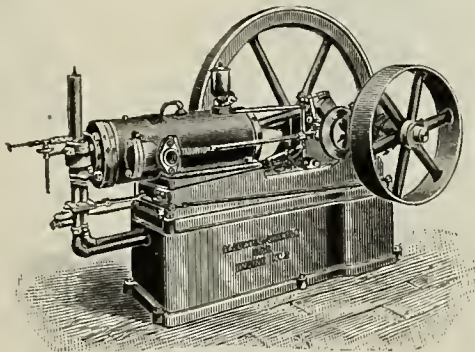


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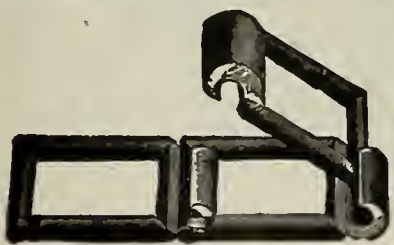
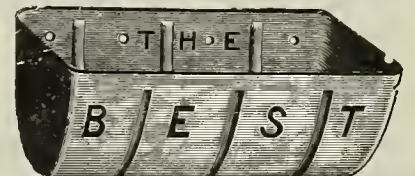


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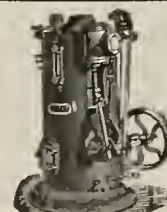
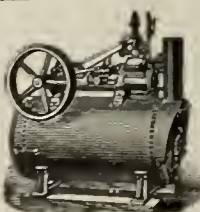
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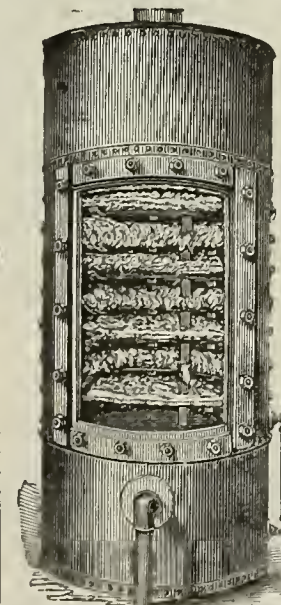
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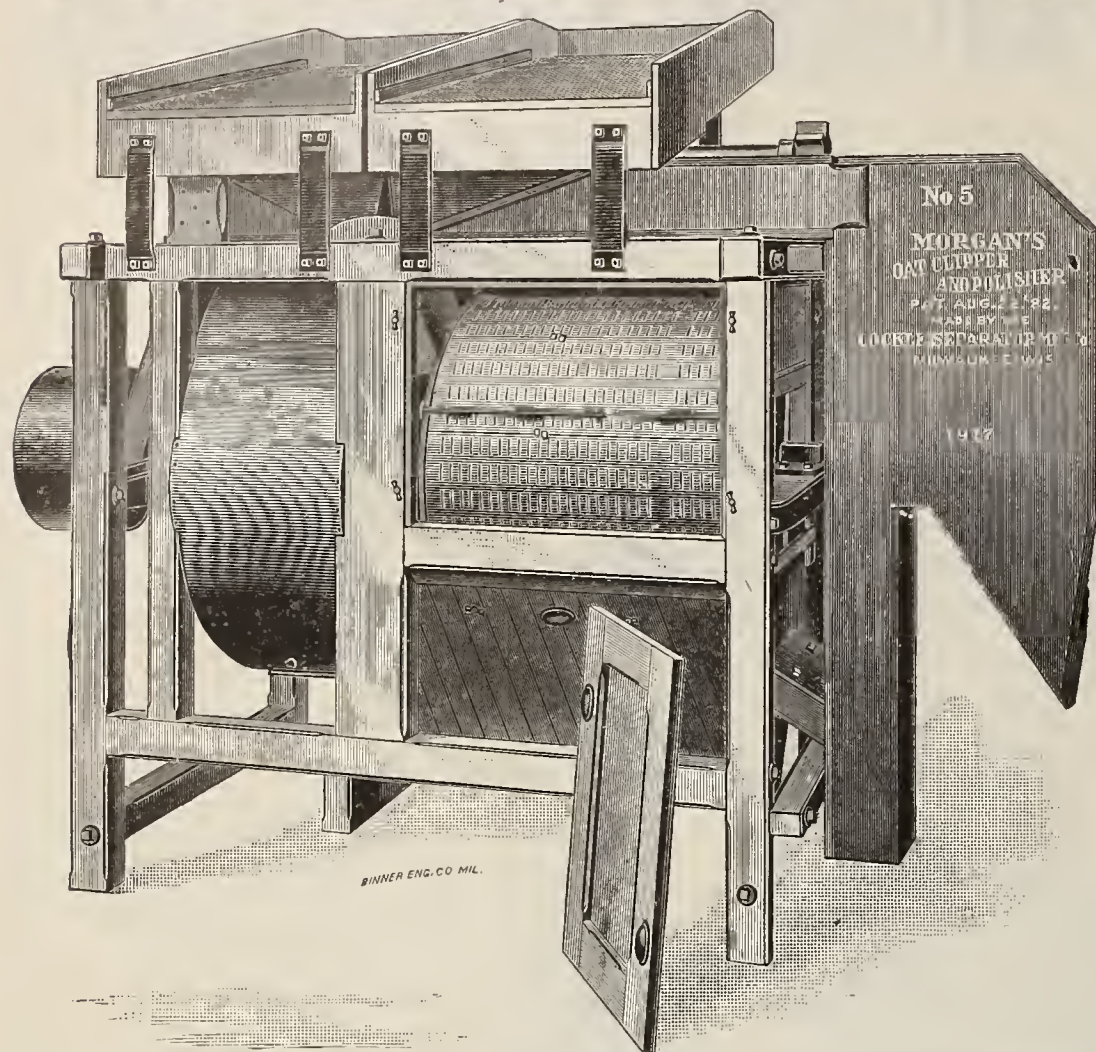
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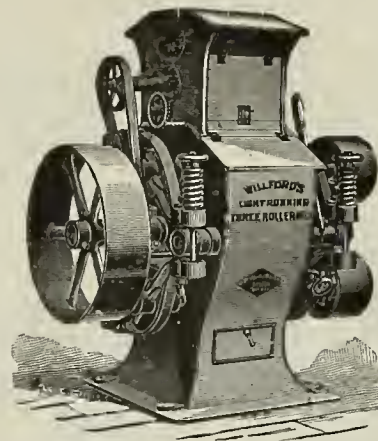
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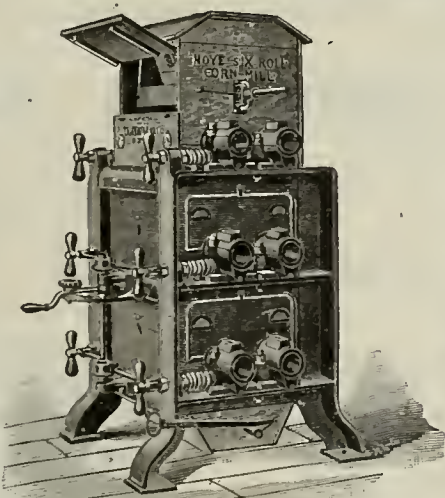
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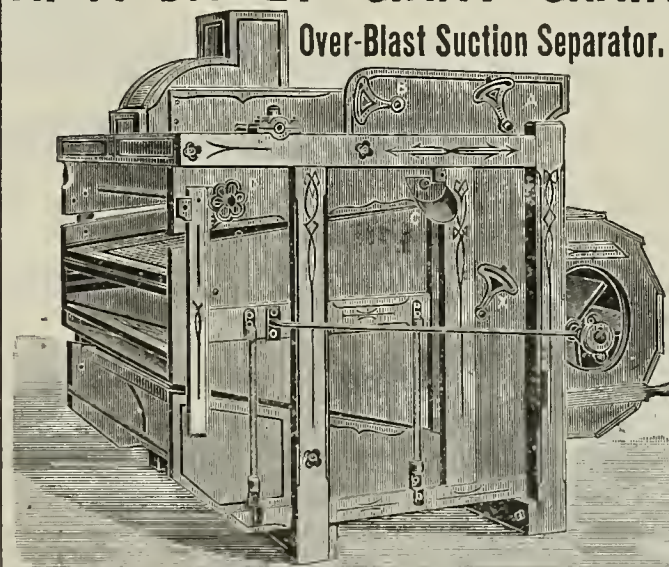
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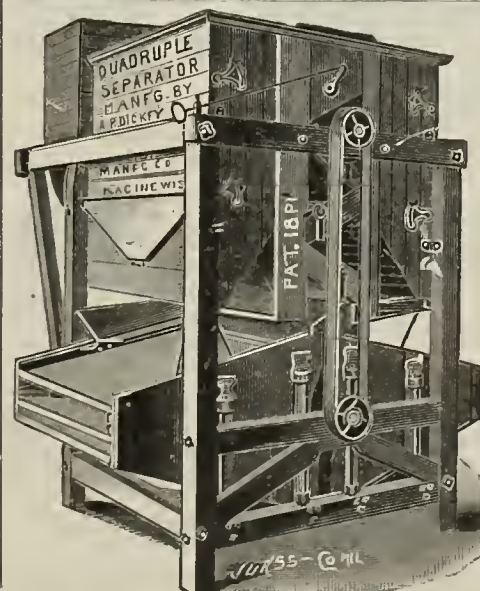
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Horse Powers, Engines, Pulleys, Belting.

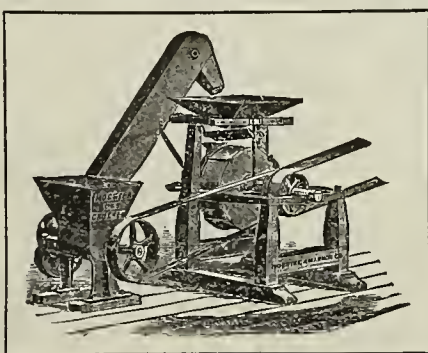
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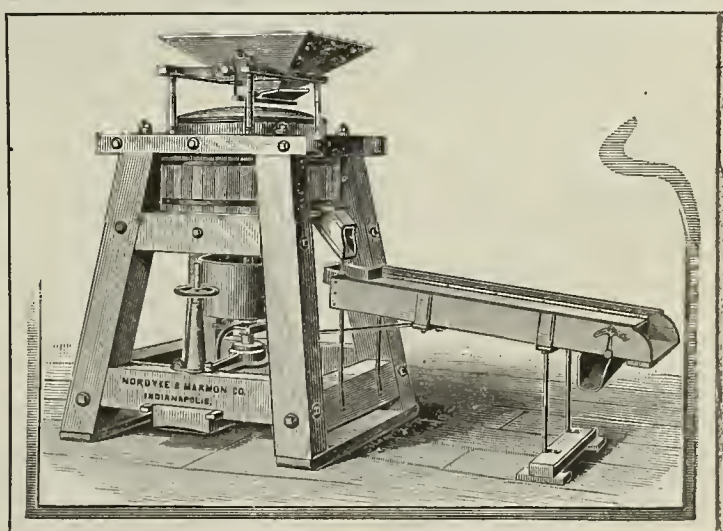
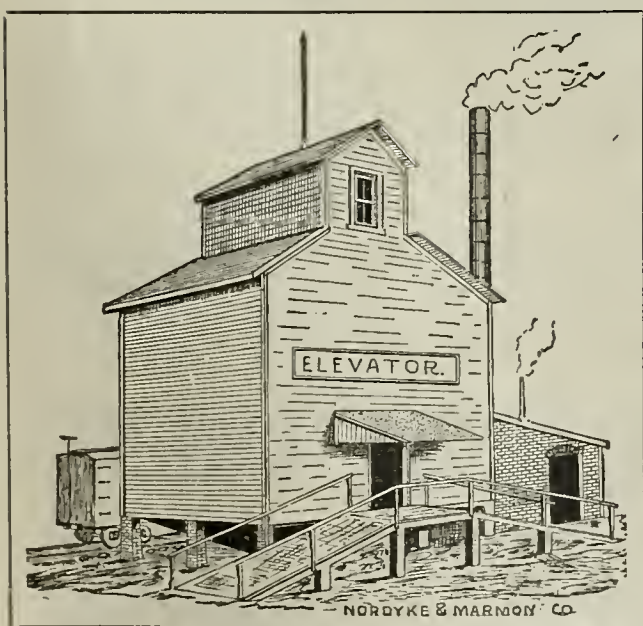
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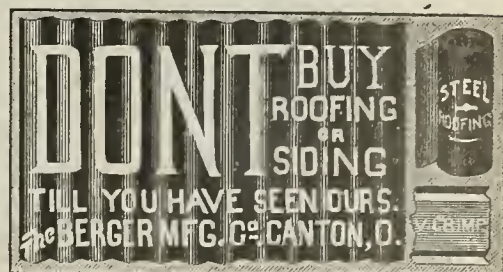
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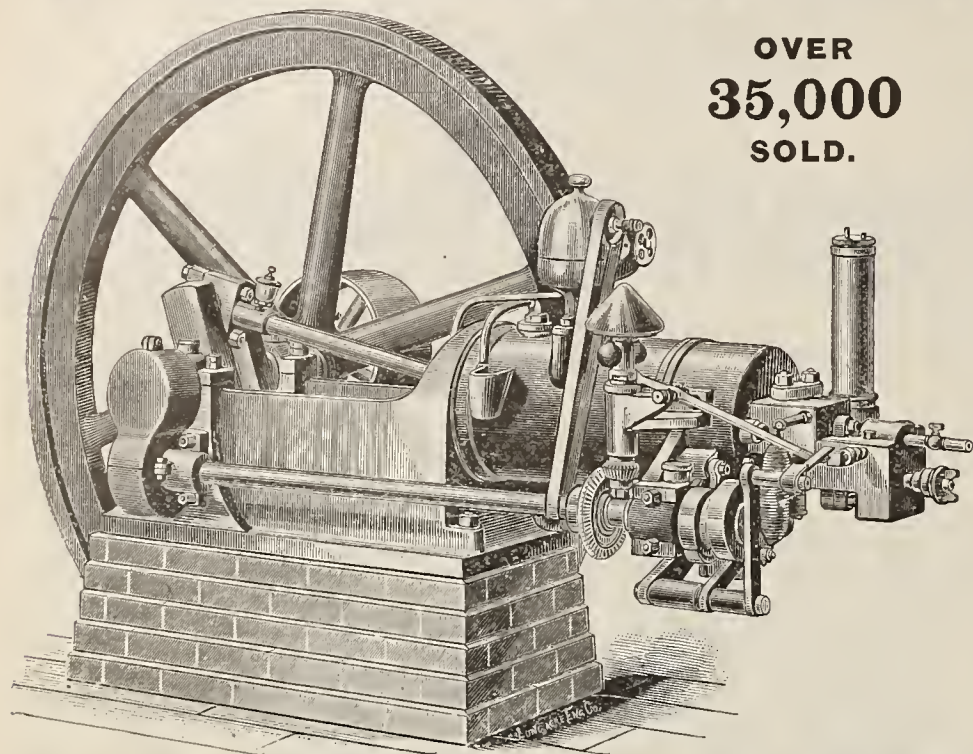
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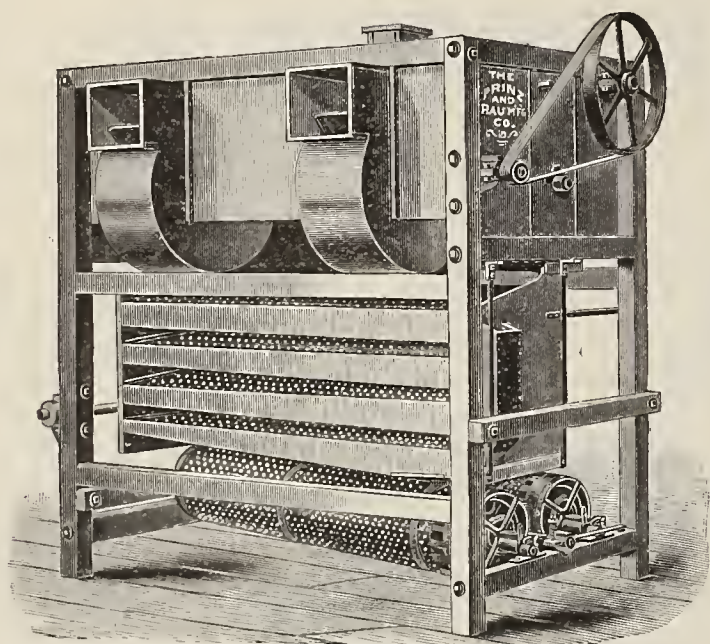
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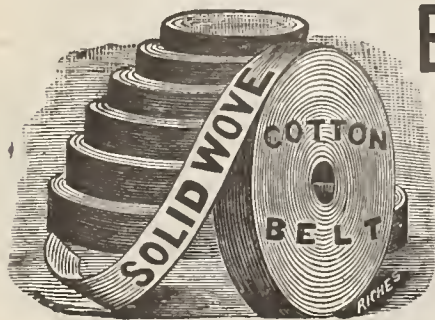
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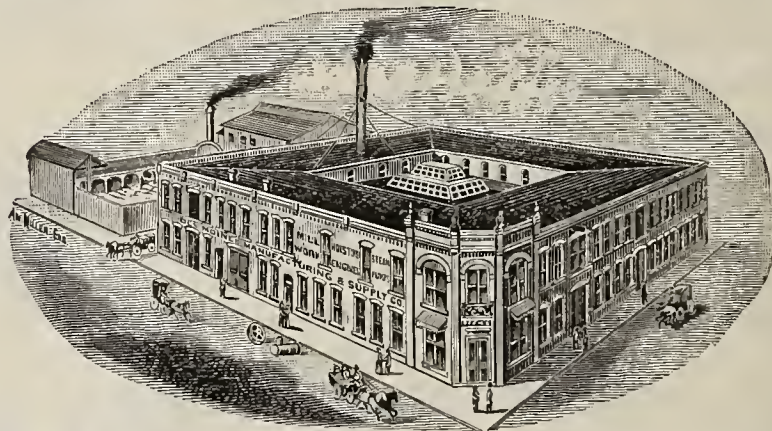
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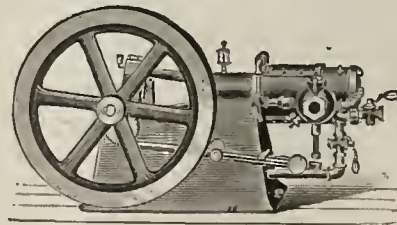
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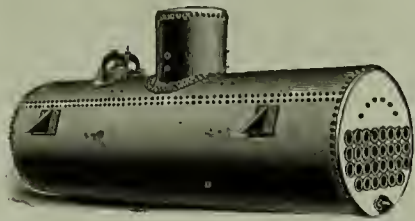
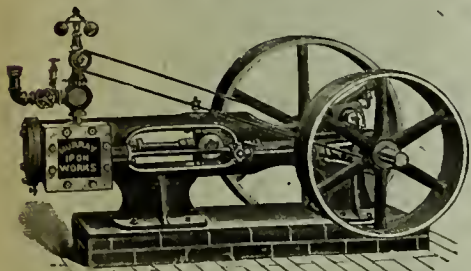
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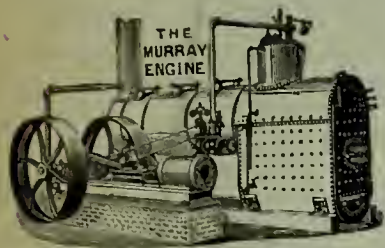
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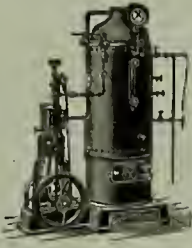


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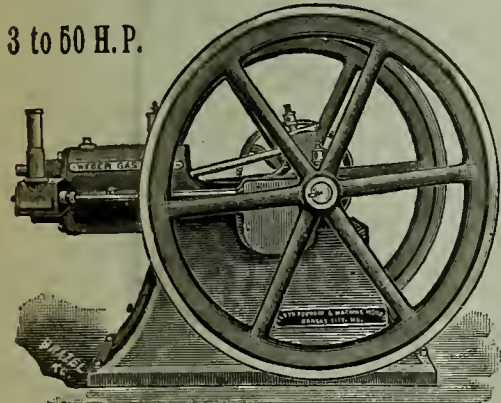
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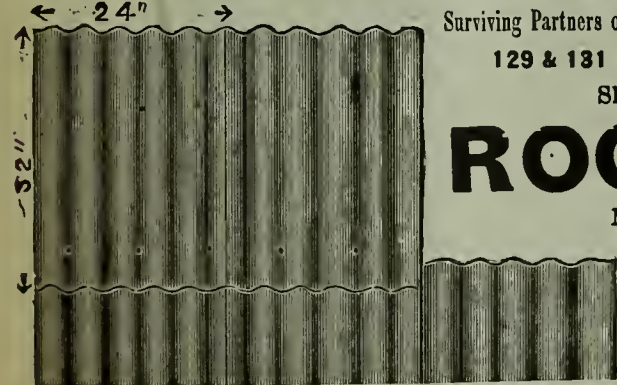
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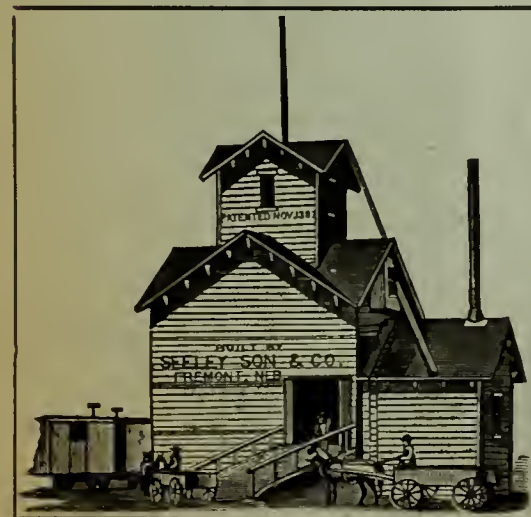
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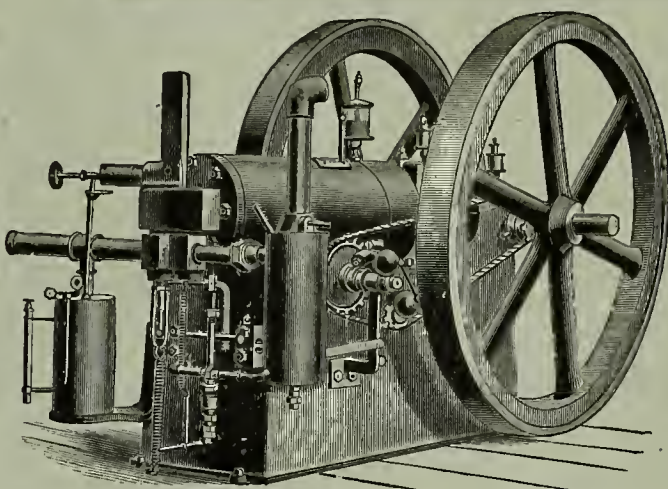
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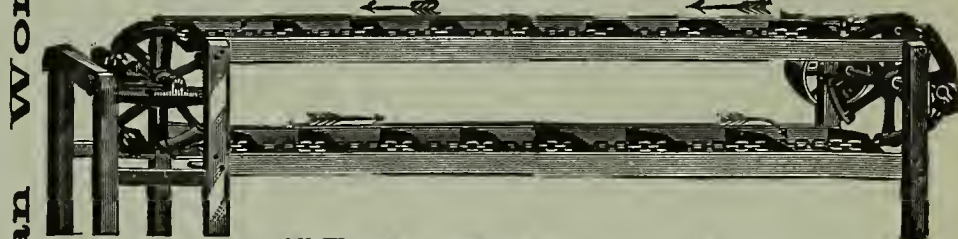
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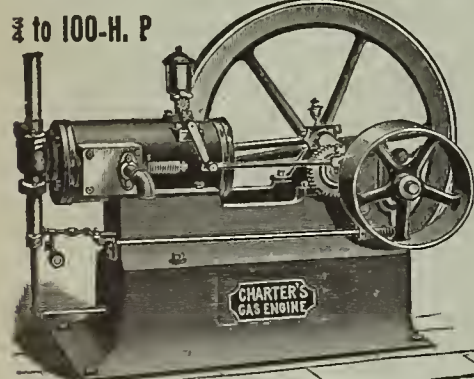
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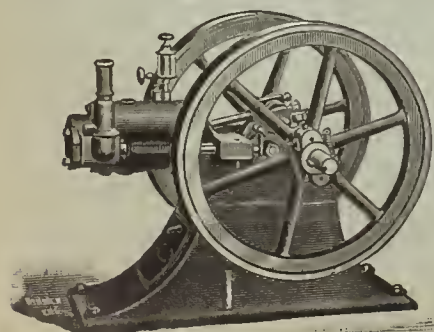
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